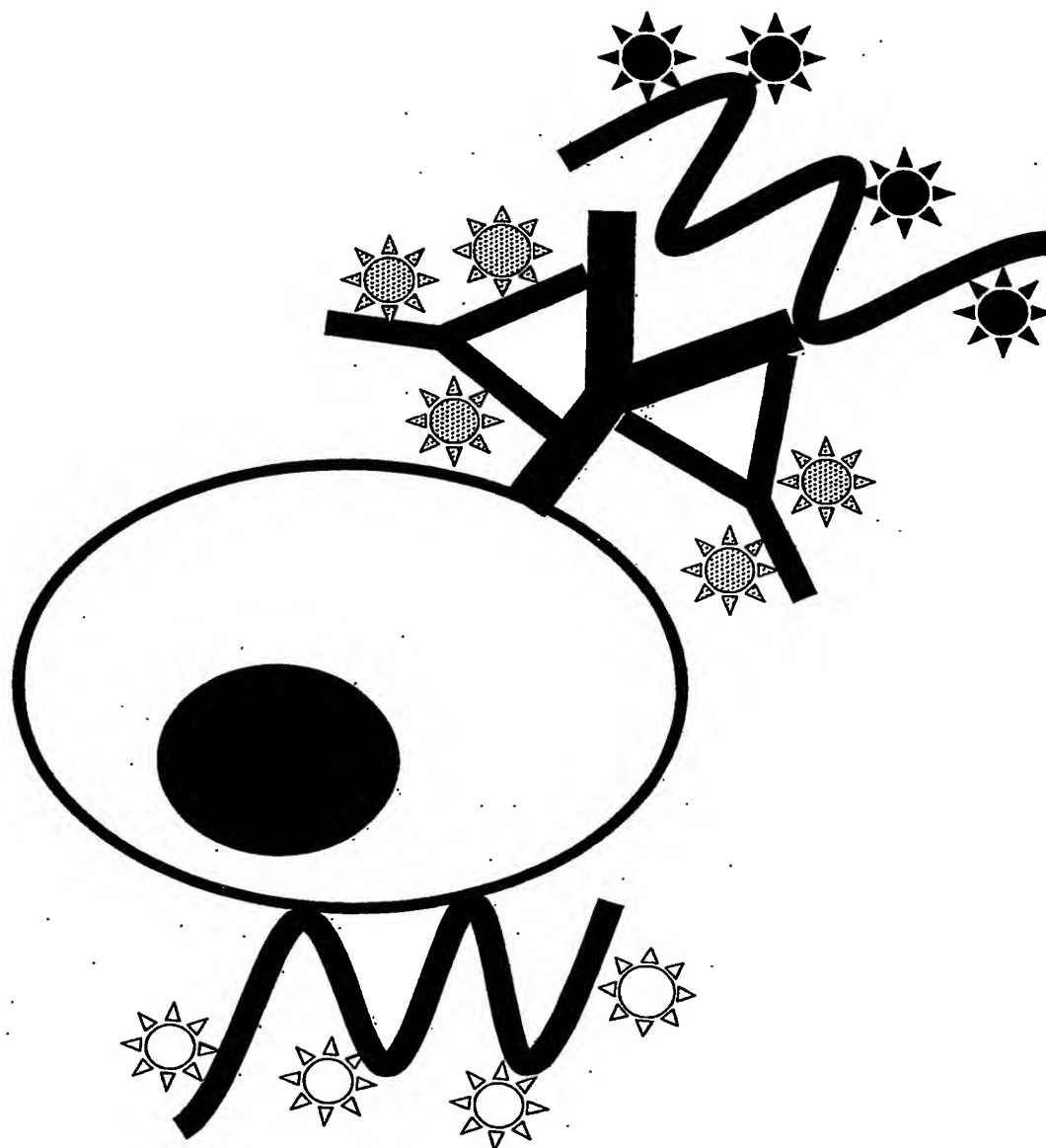


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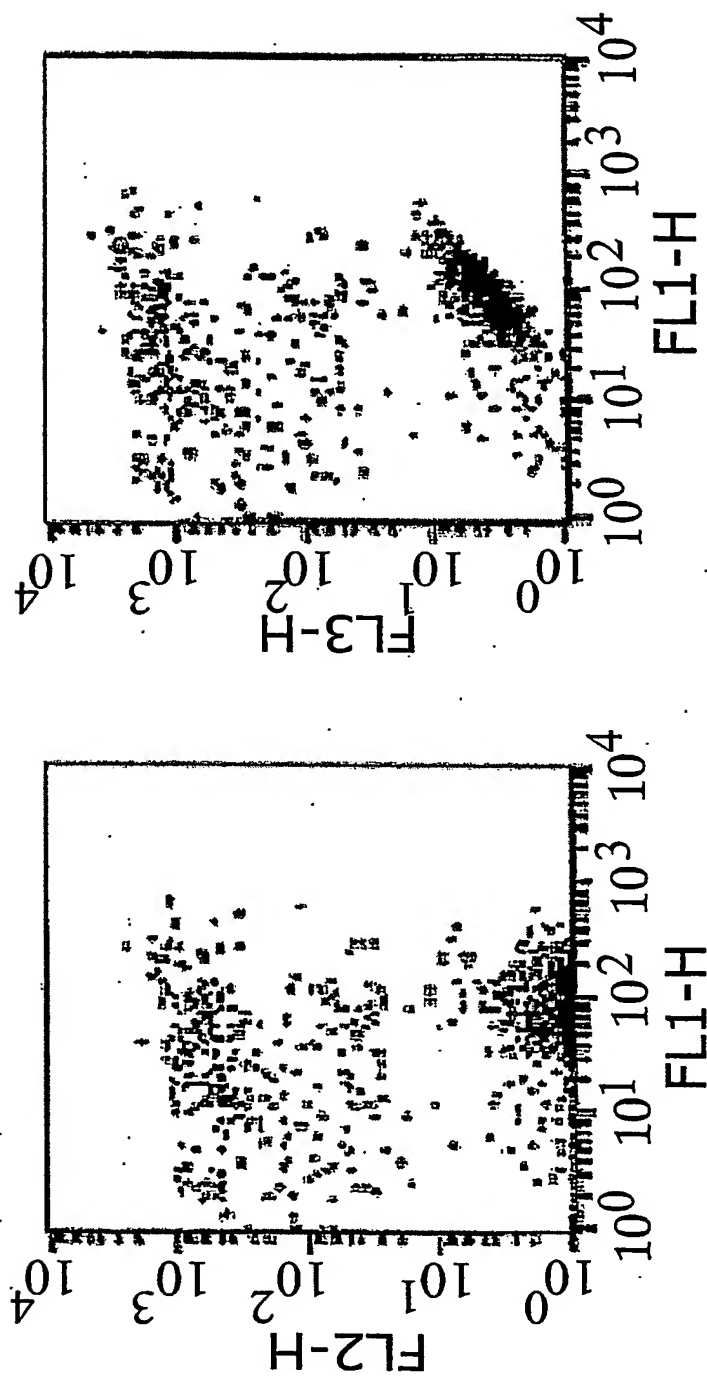
Figure 1



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Figure 2A



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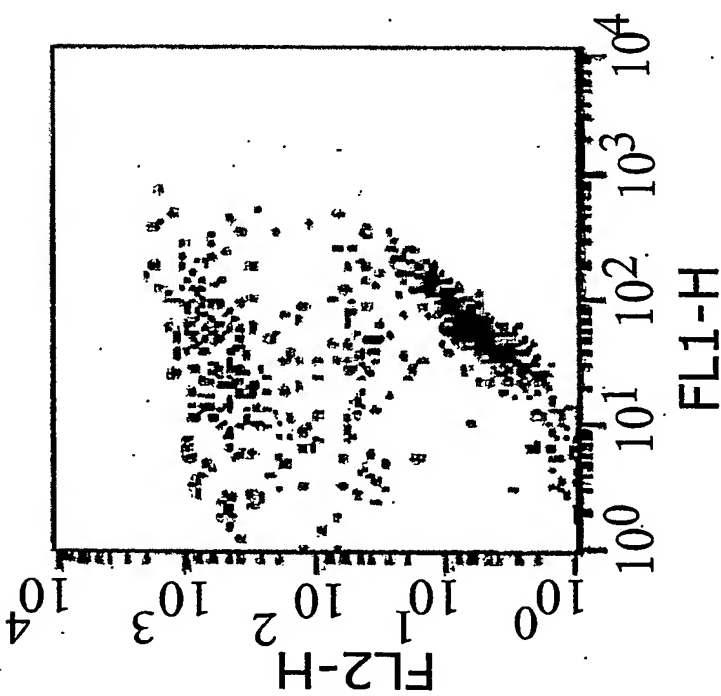
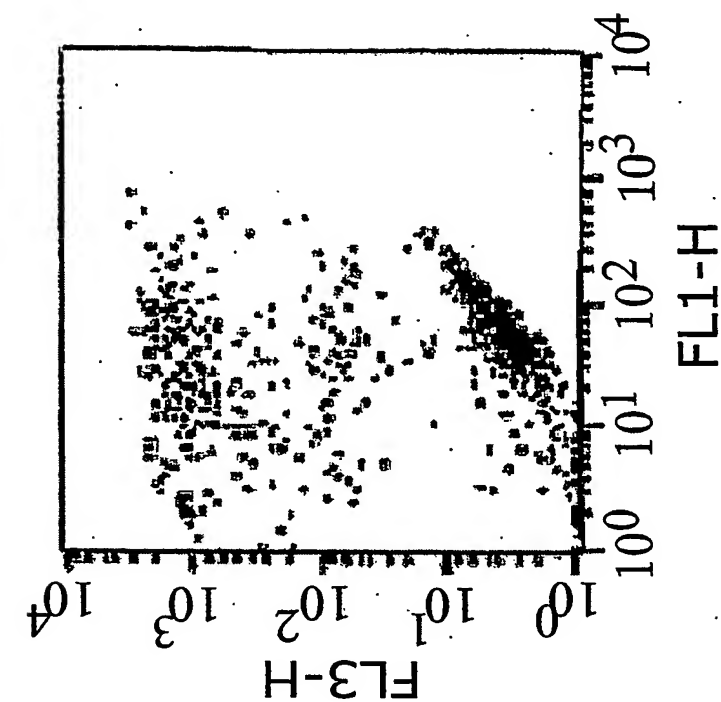


Figure 2B

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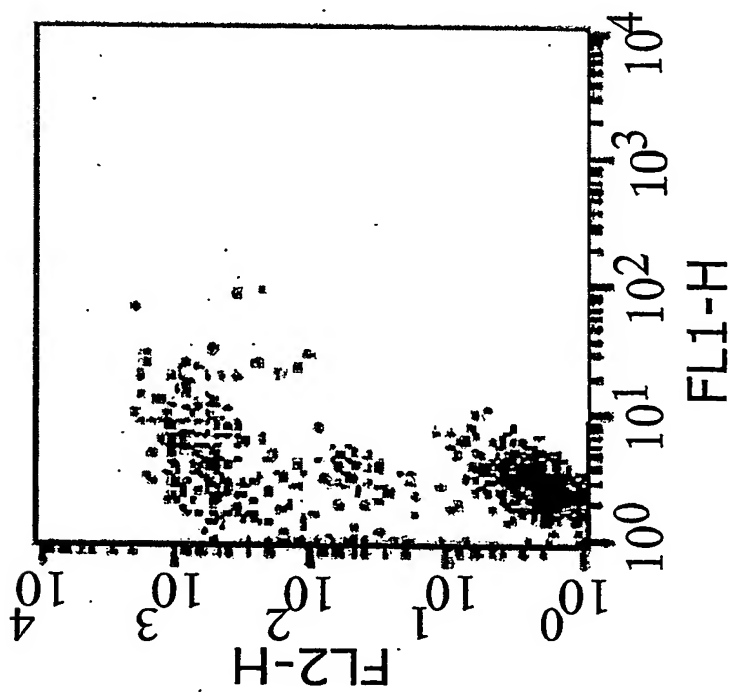
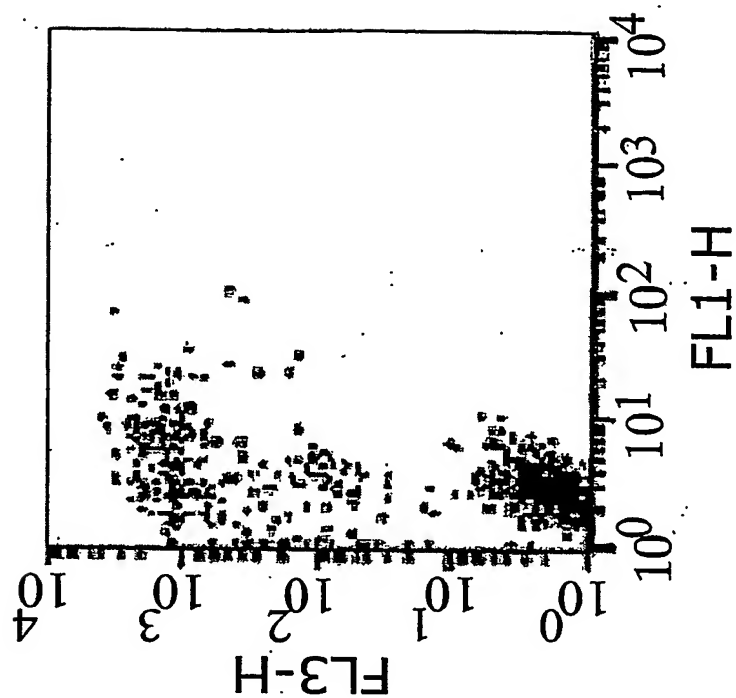


Figure 2C

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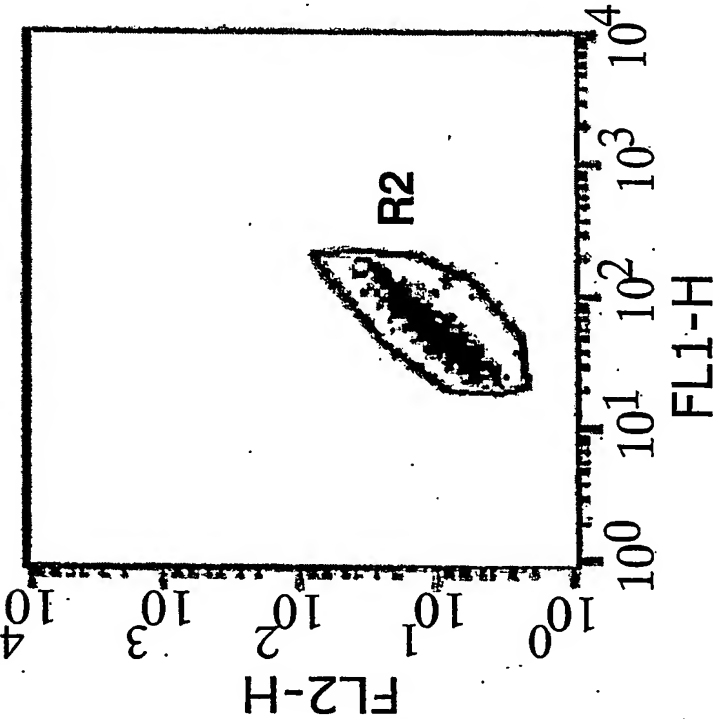
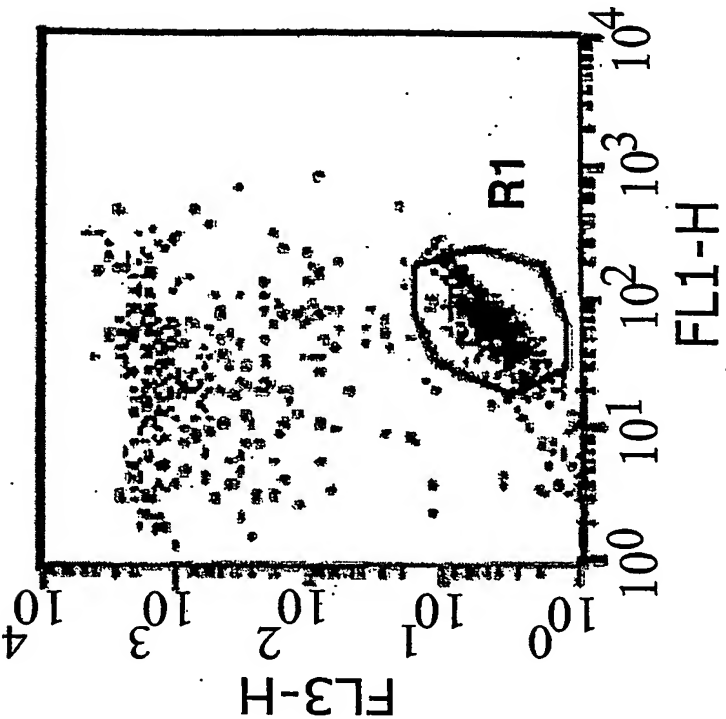


Figure 2D

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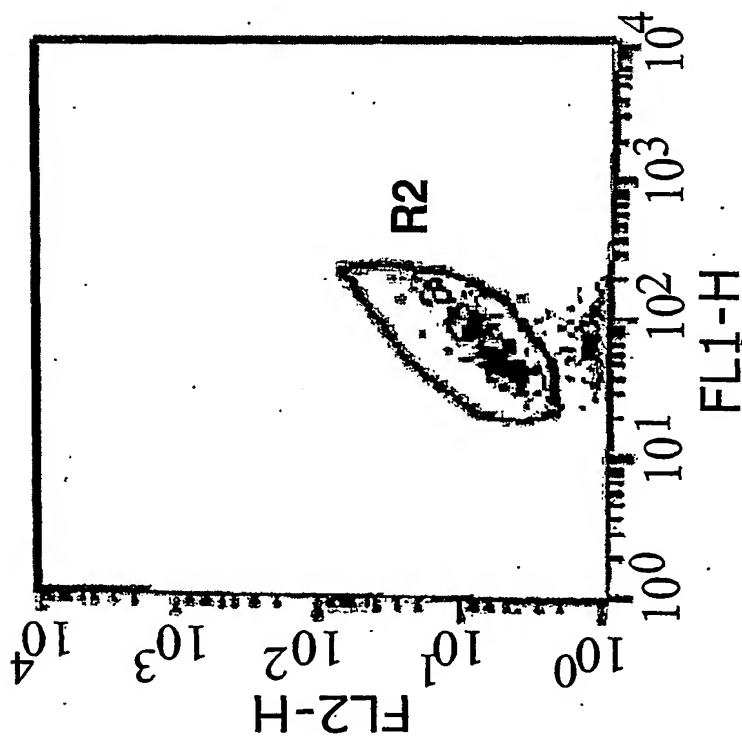
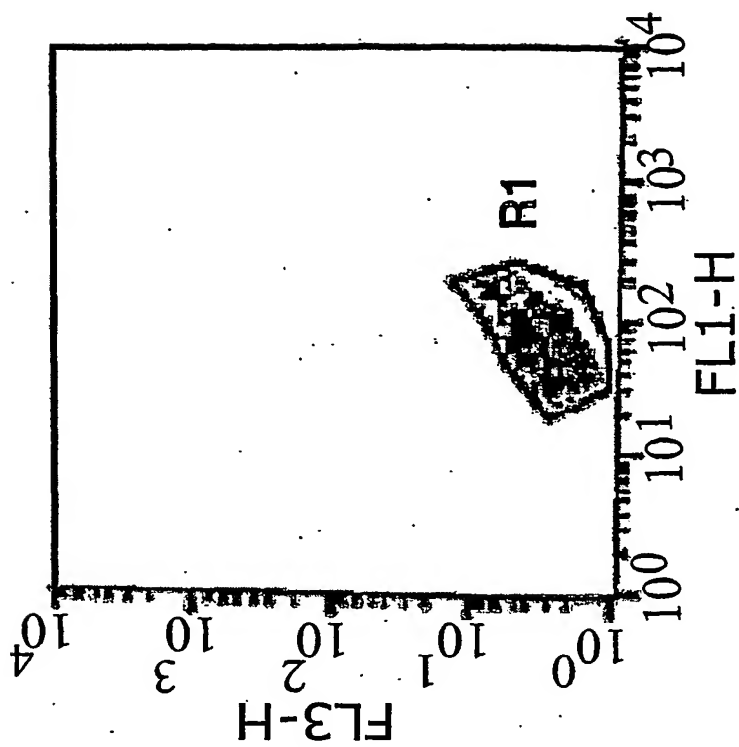


Figure 2E

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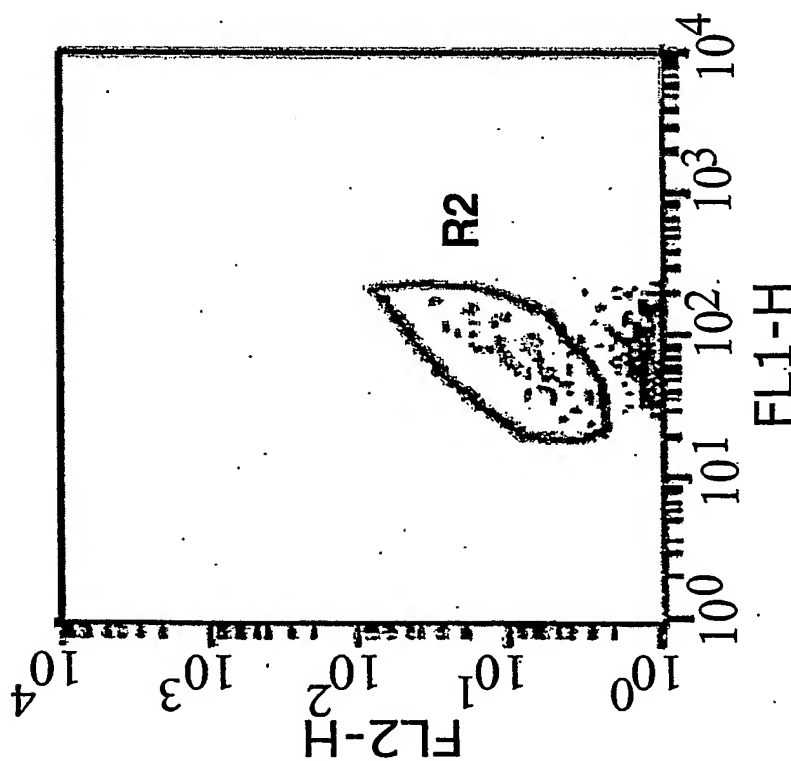
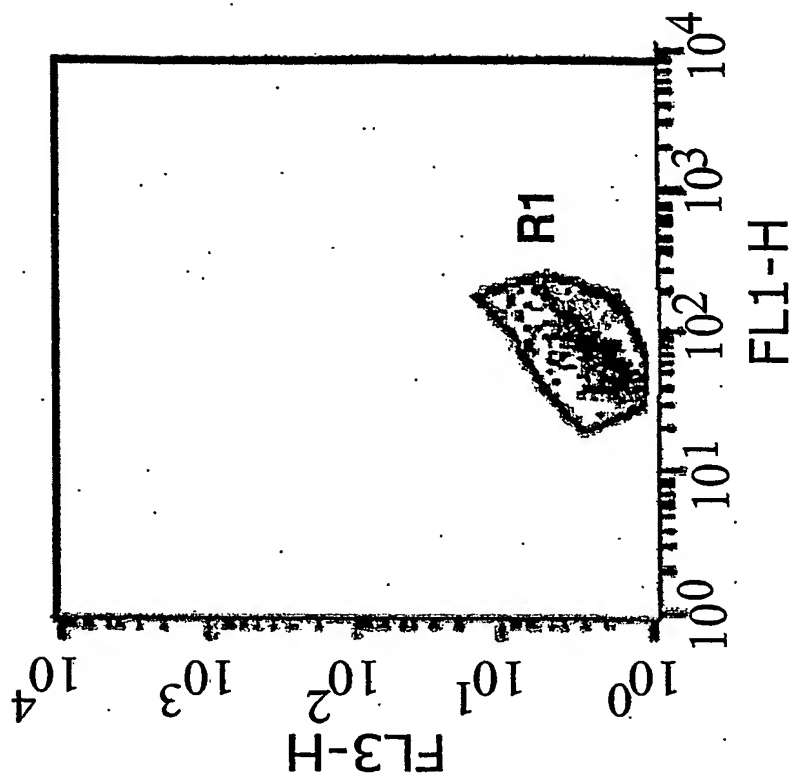


Figure 2F

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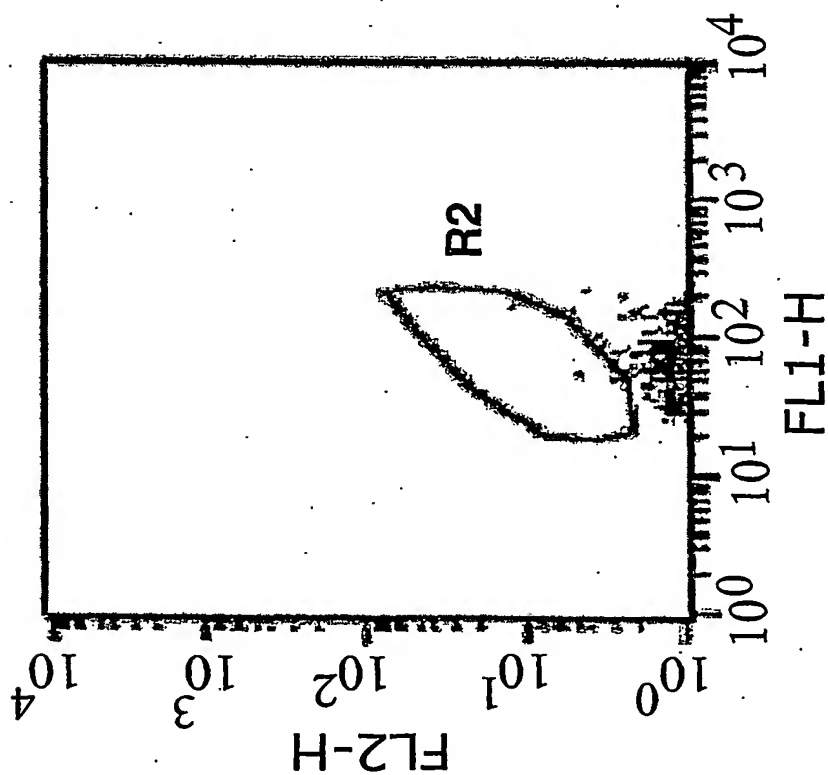
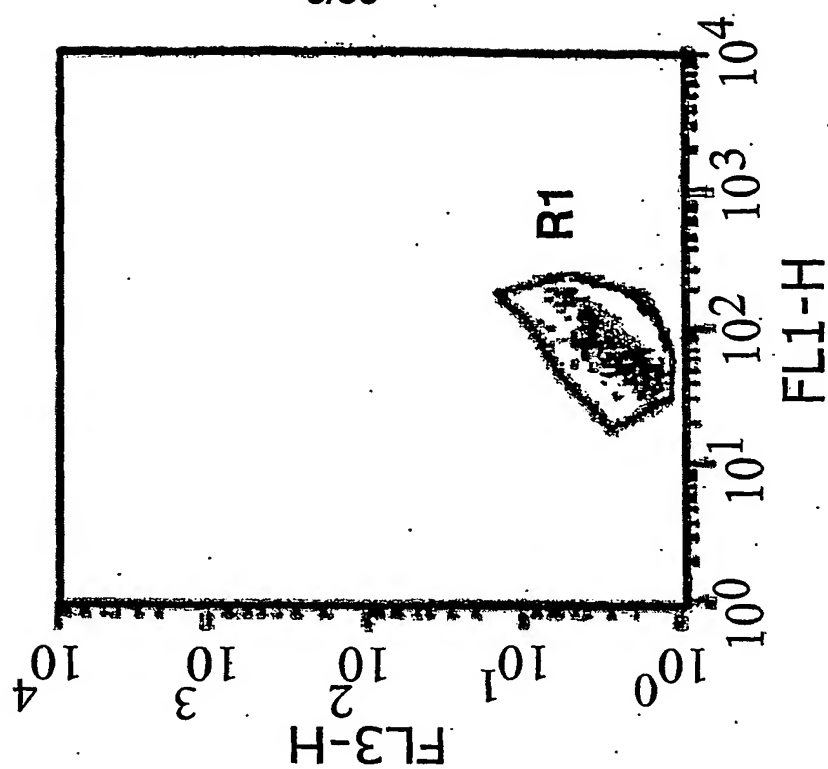
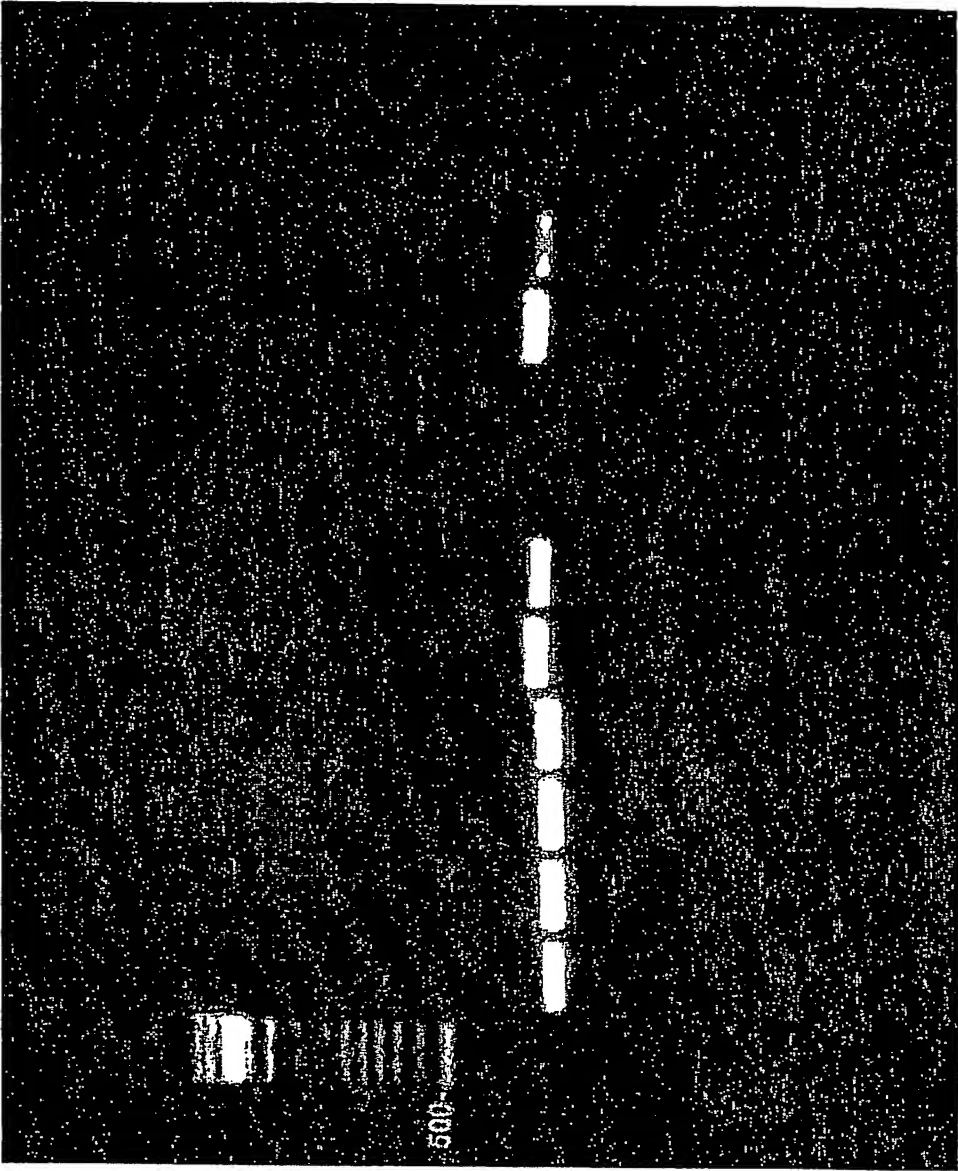


Figure 2G

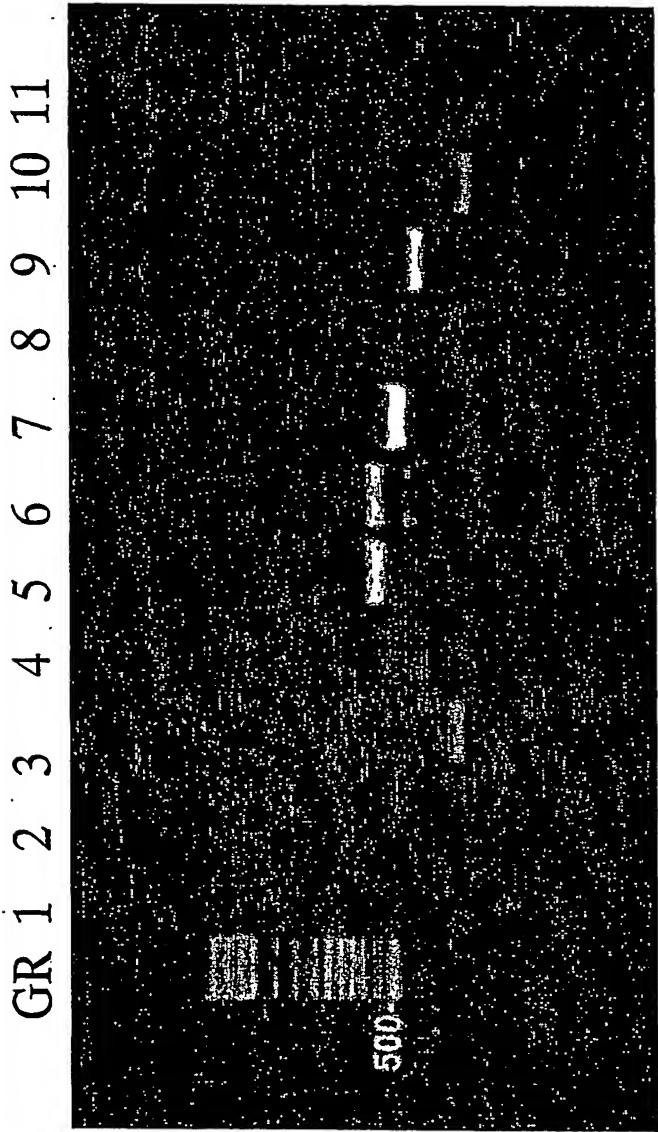
Figure 3A

GR 1 2 3 4 5 6 7 8 9 10 11 12



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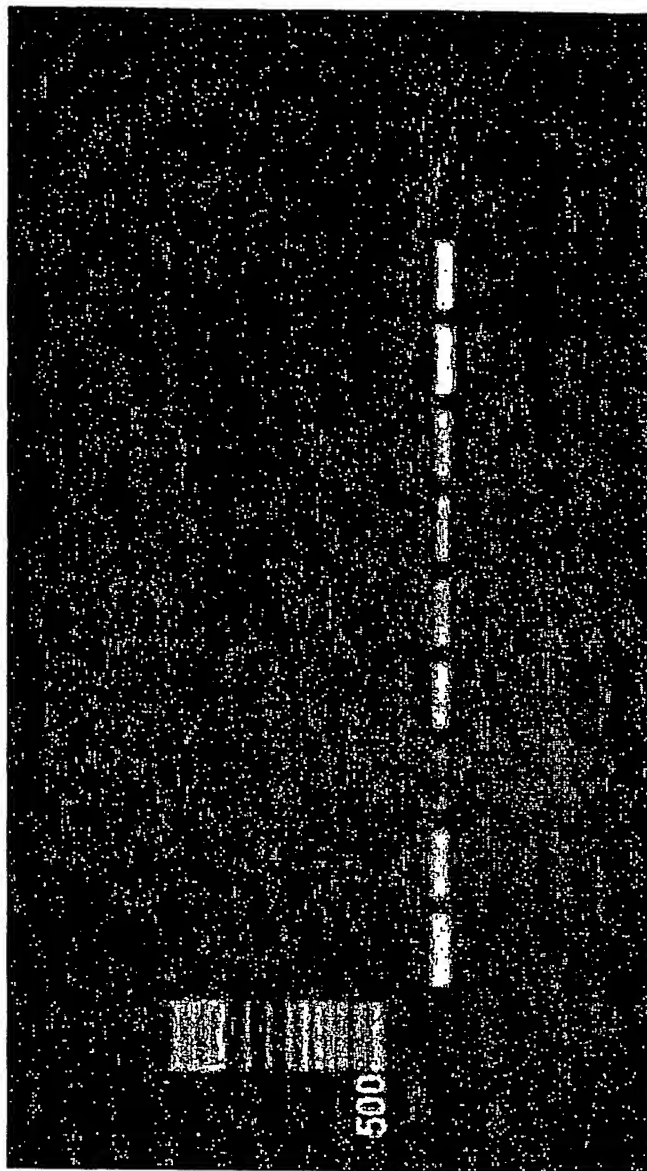
Figure 3B



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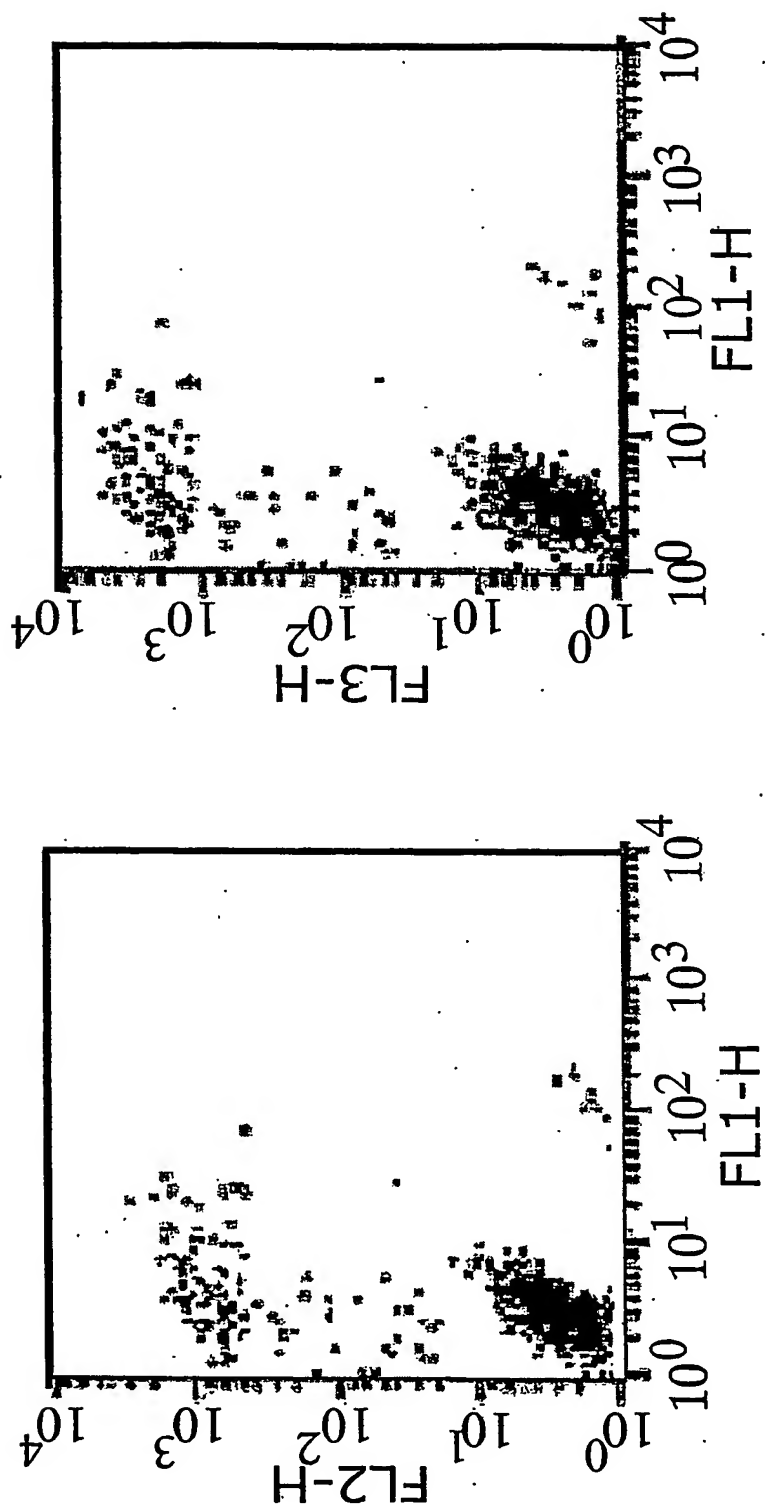
Figure 3C

GR 1 2 3 4 5 6 7 8 9 10 11



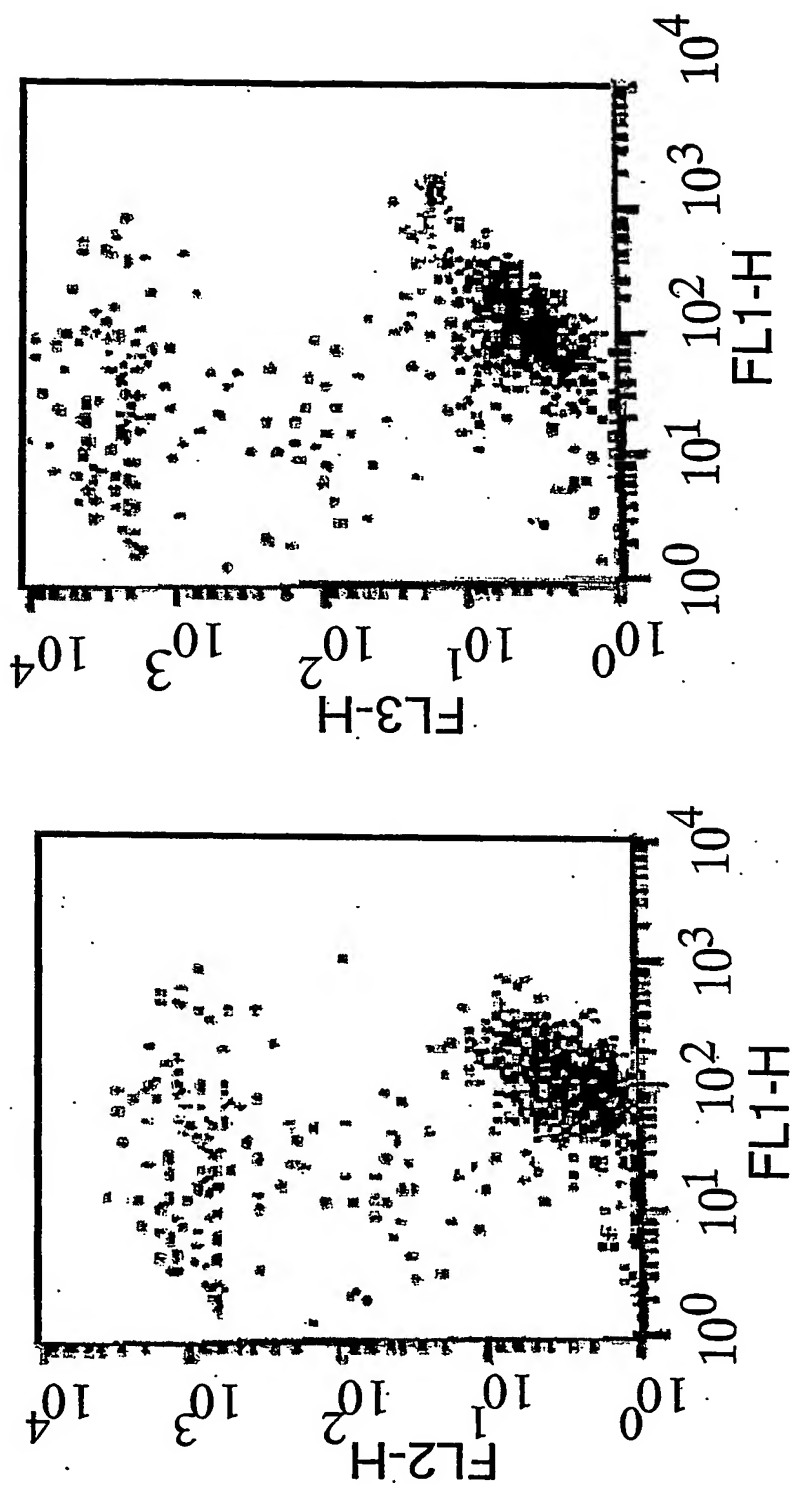
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Figure 4A



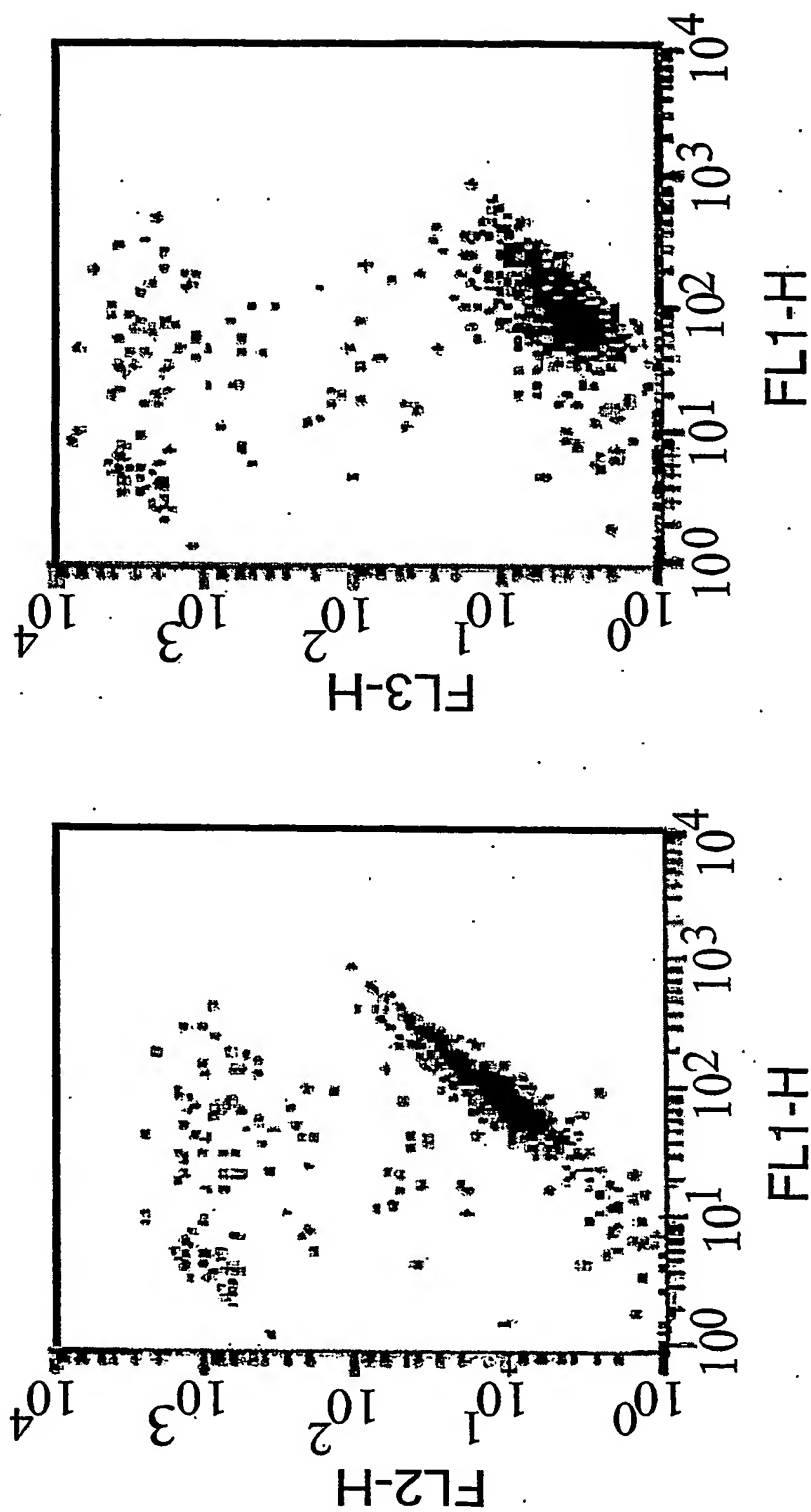
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Figure 4B



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Figure 4C



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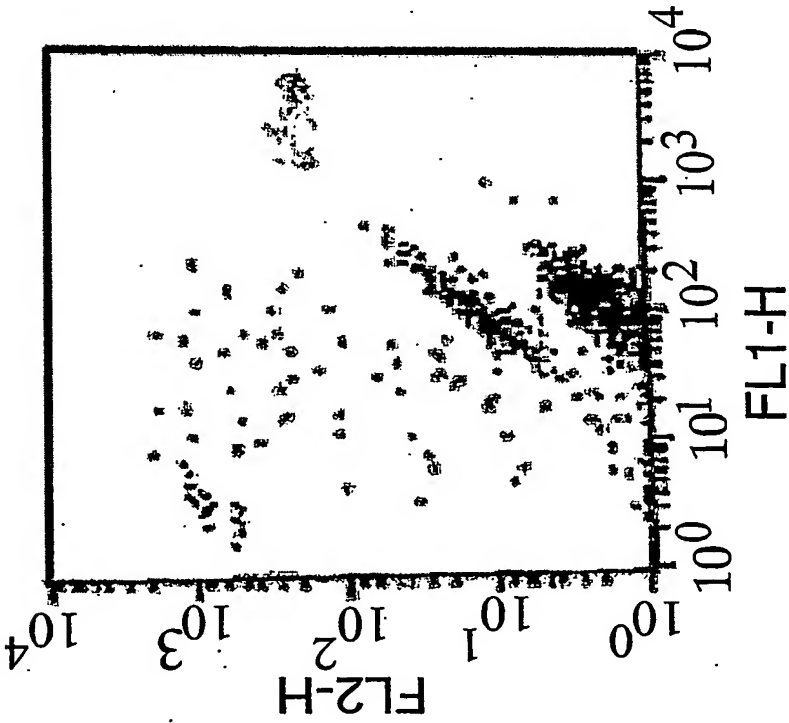
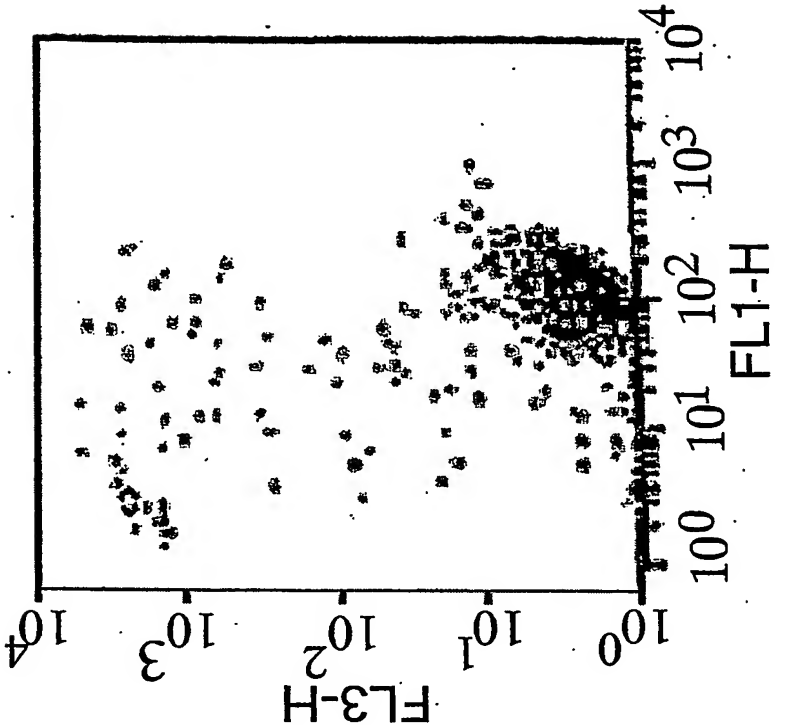


Figure 4D

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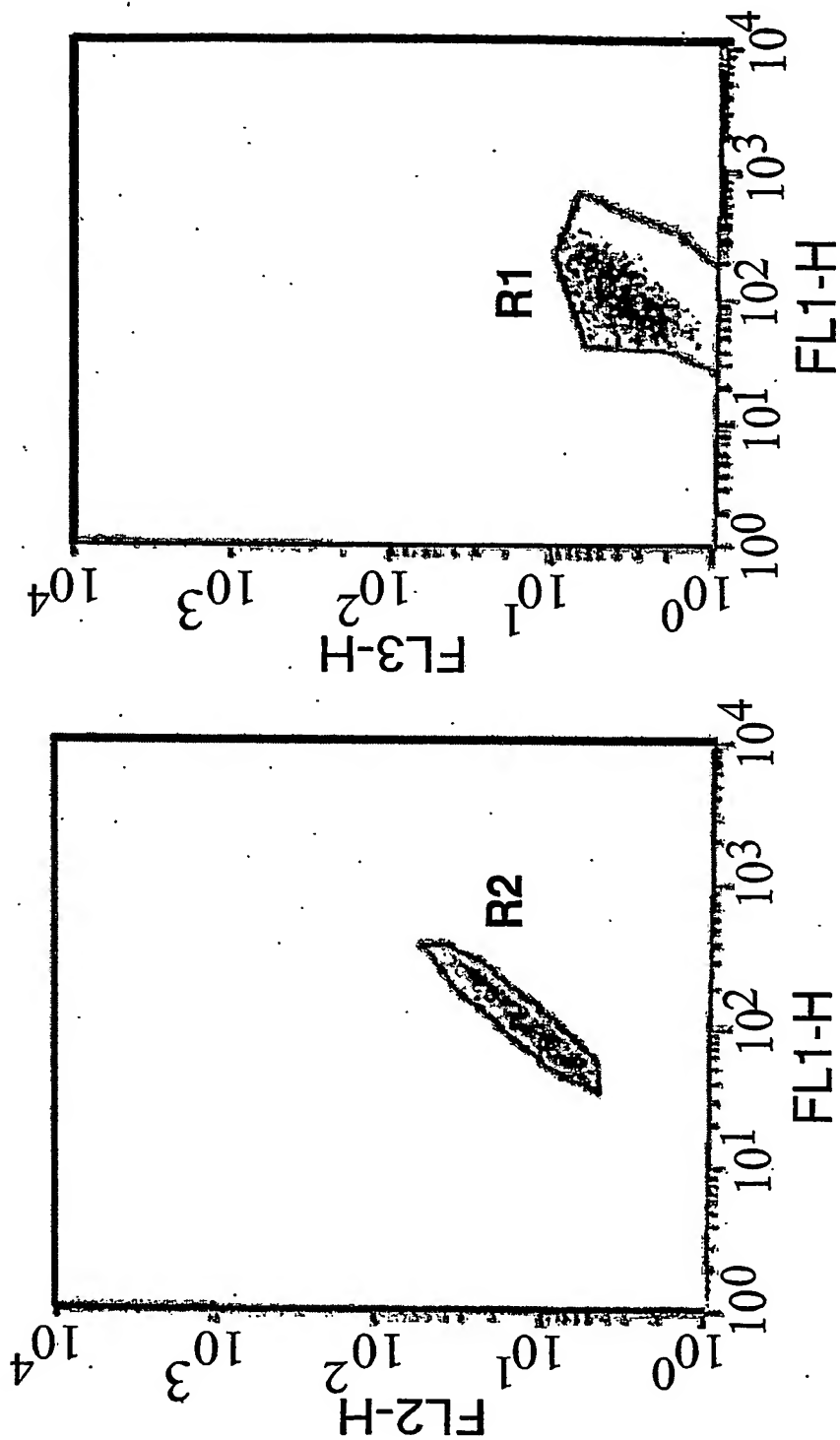
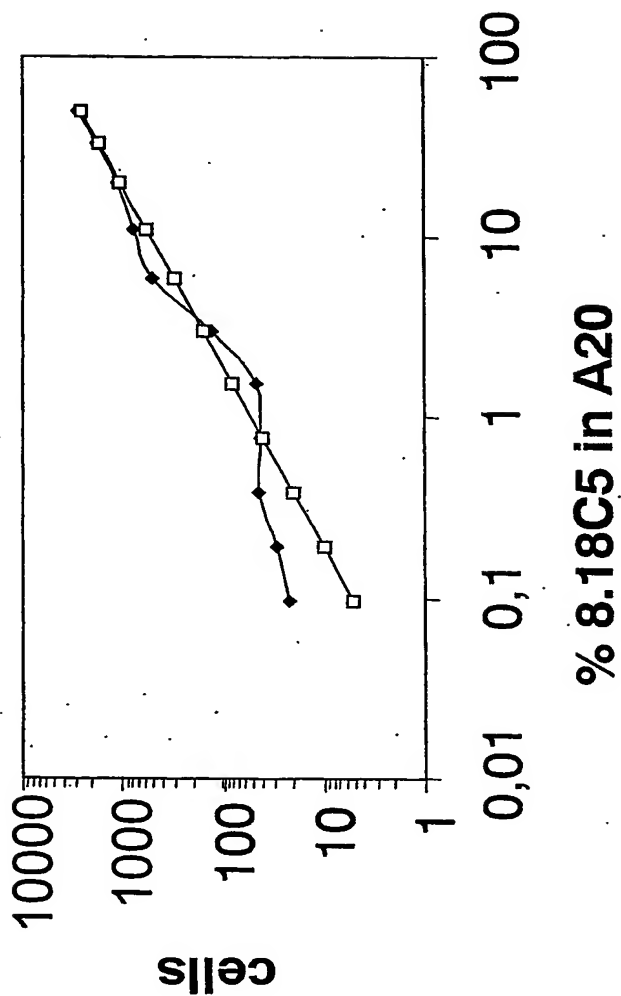


Figure 4E

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Figure 5



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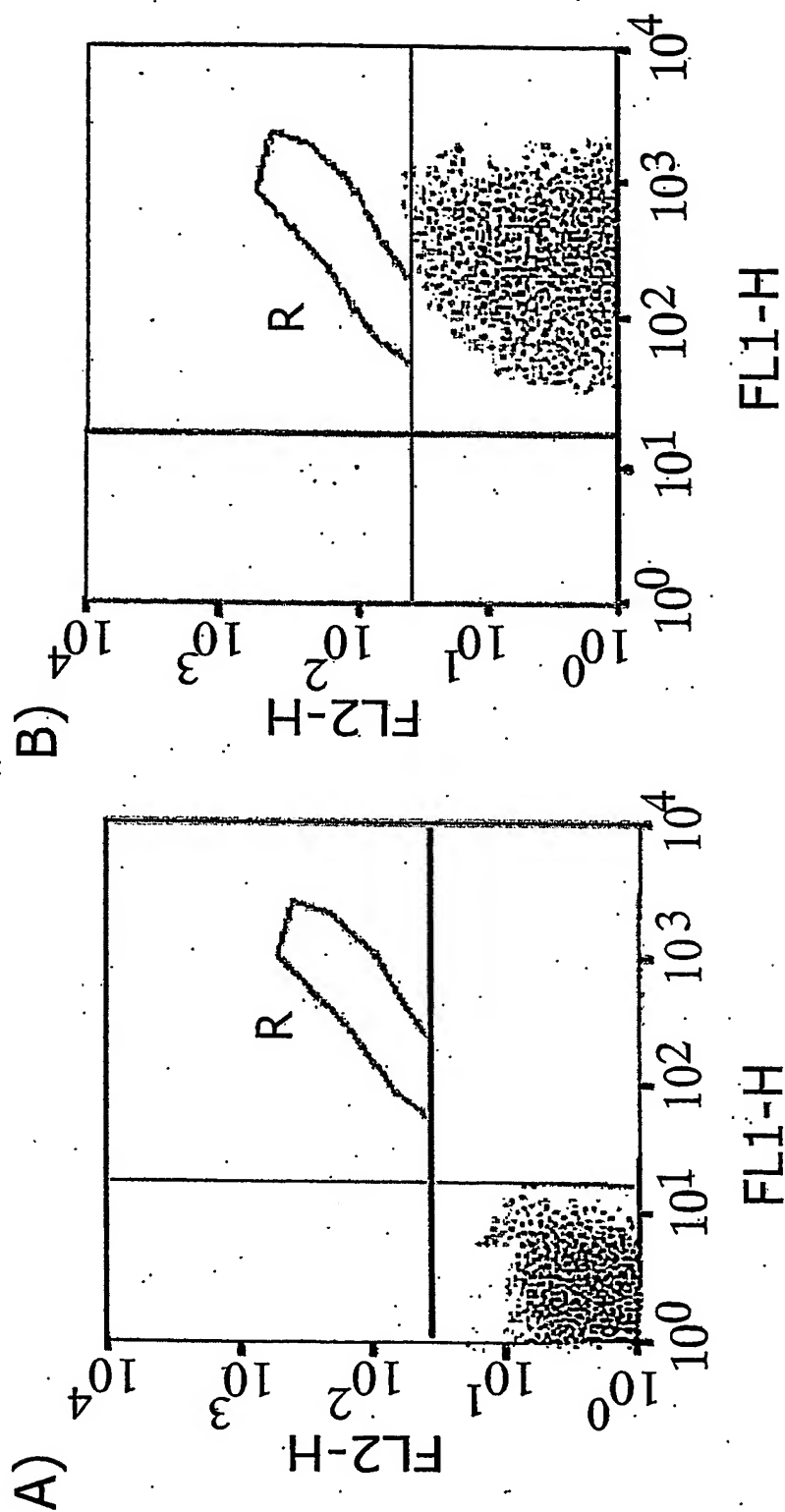
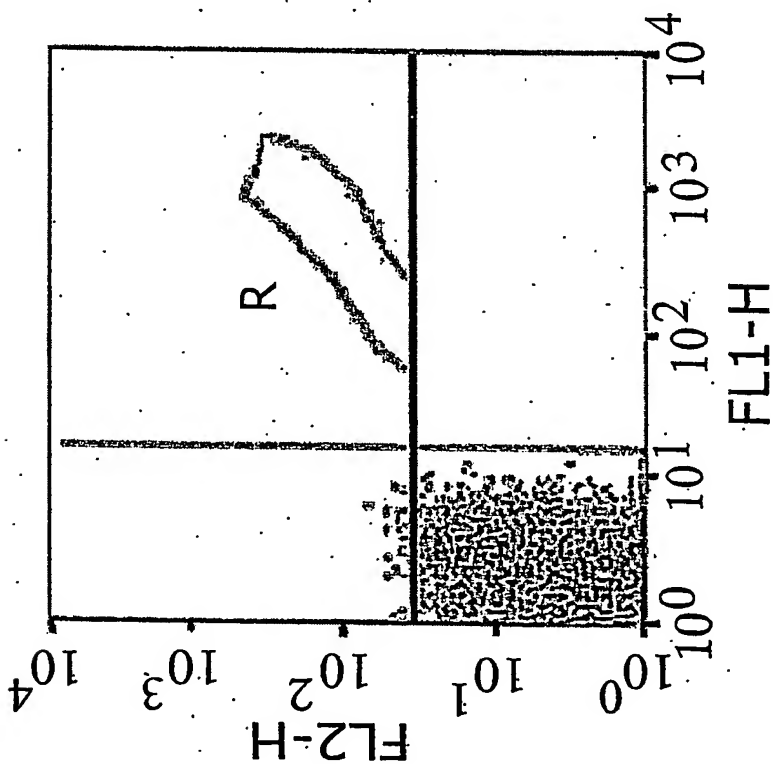


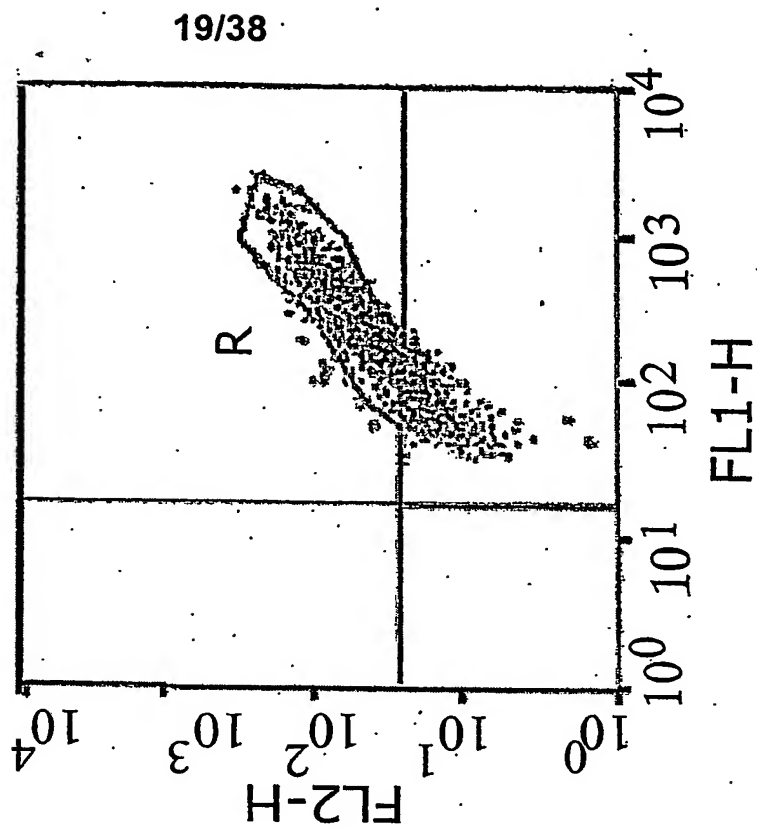
Figure 6

Figure 6

C)



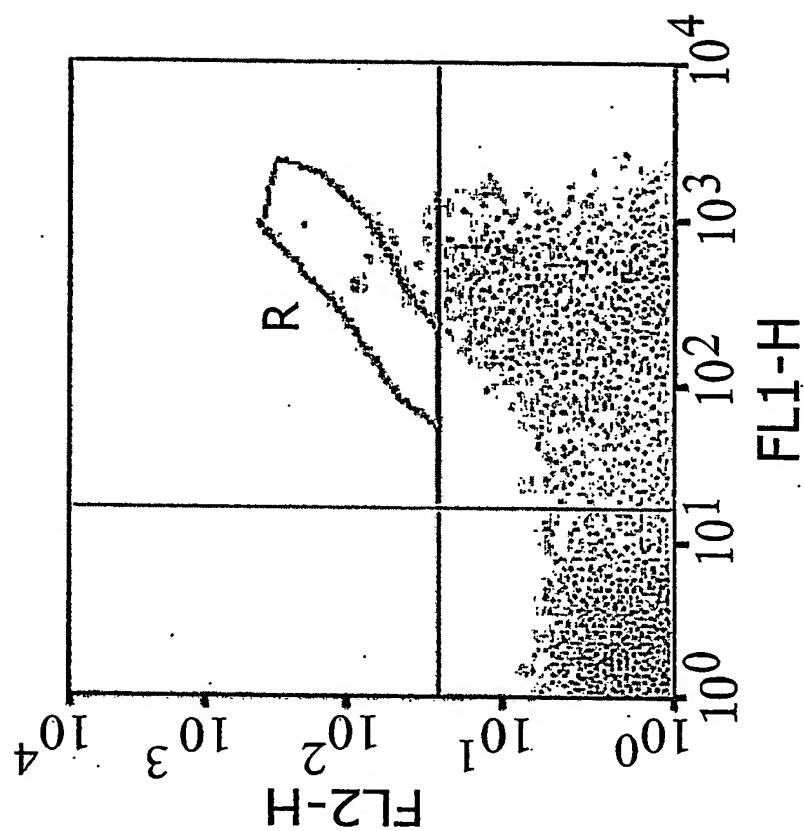
D)



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Figure 6

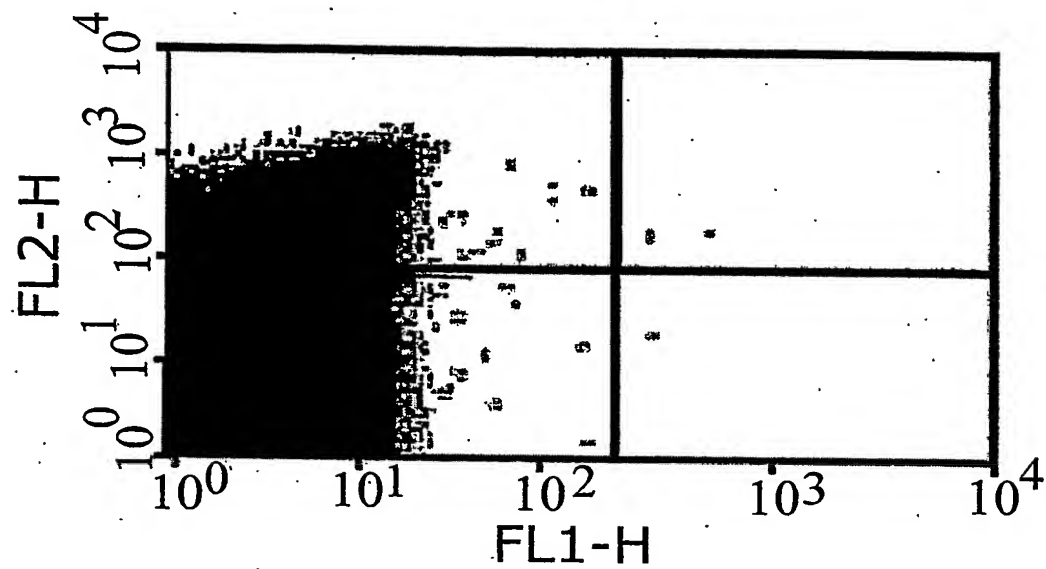
E)



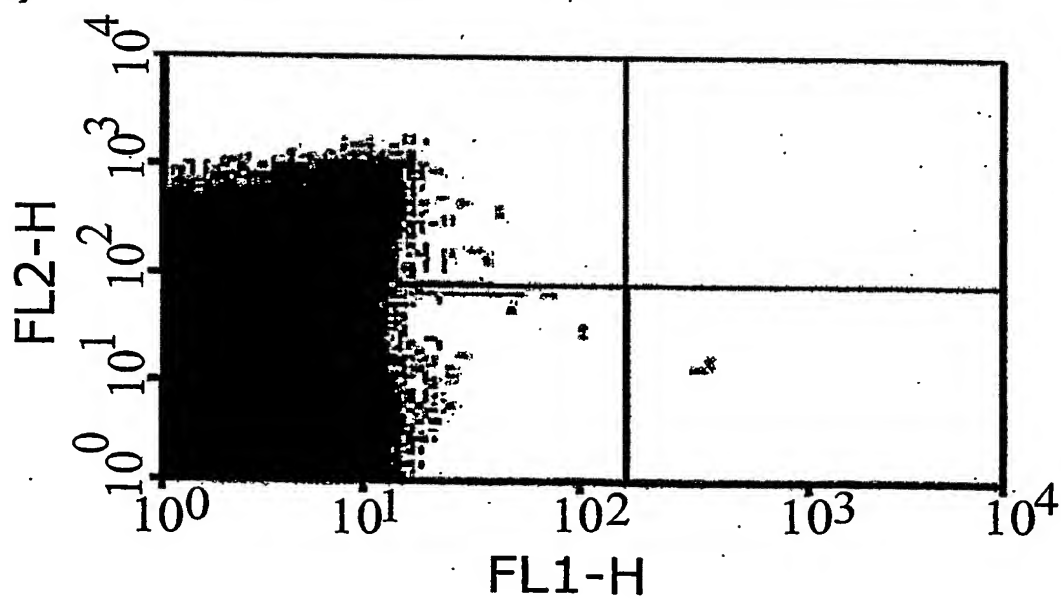
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Figure 7

A)



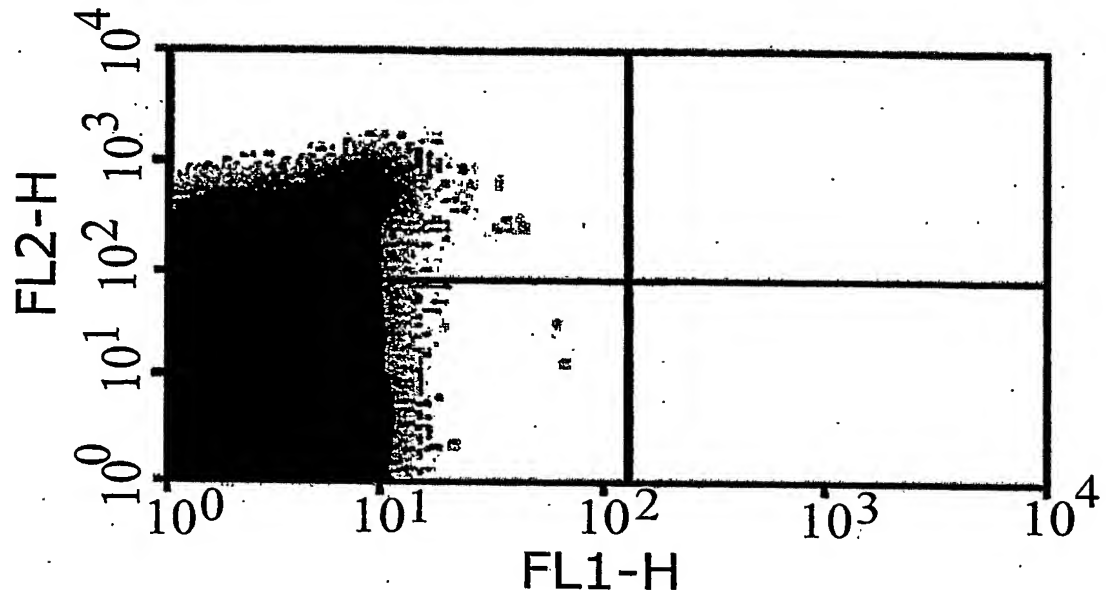
B)



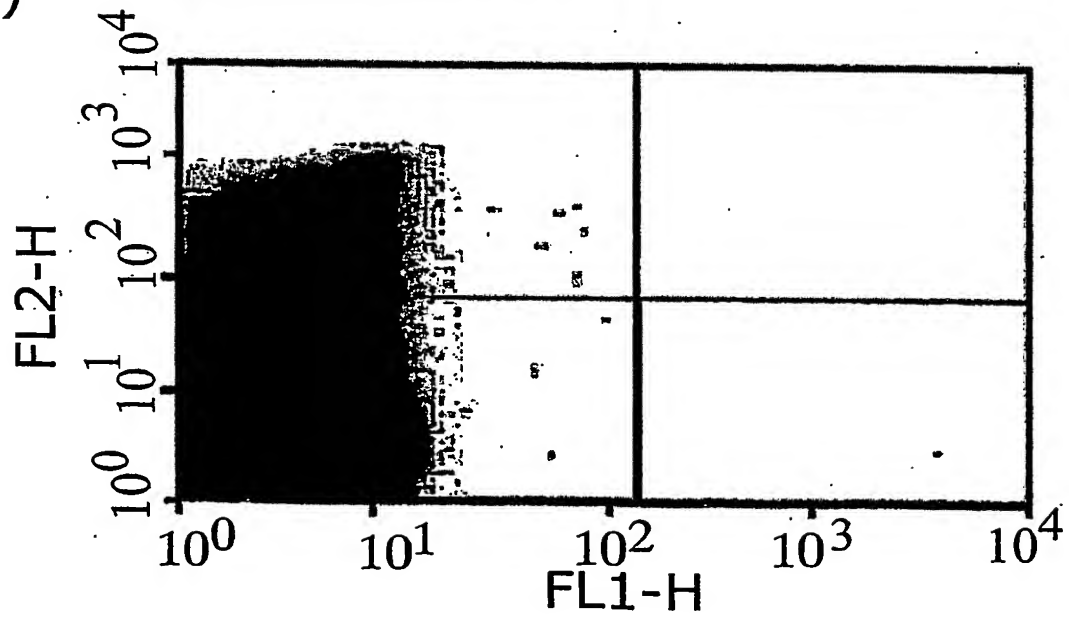
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Figure 7

C)



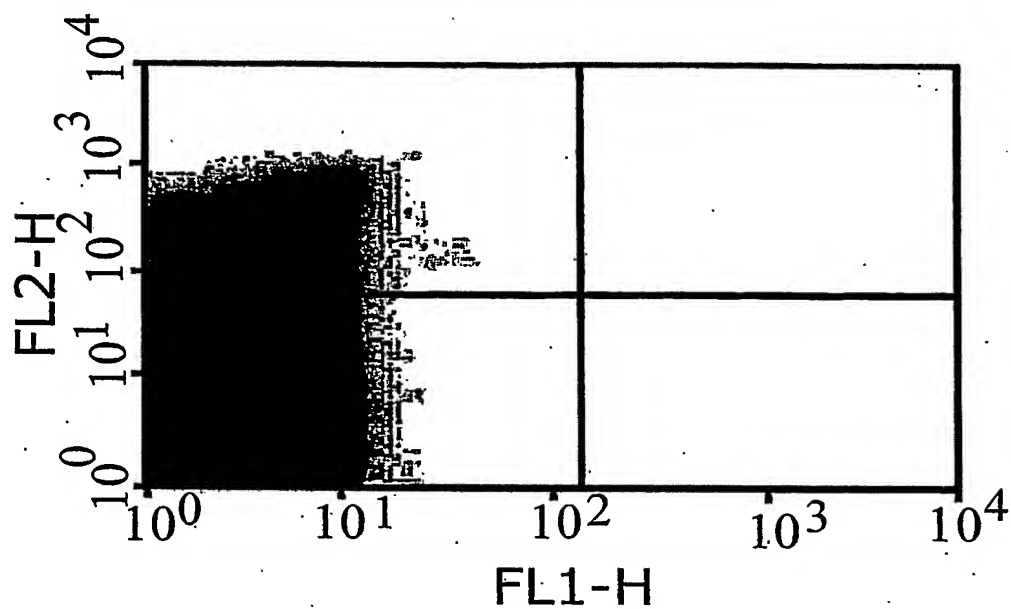
D)



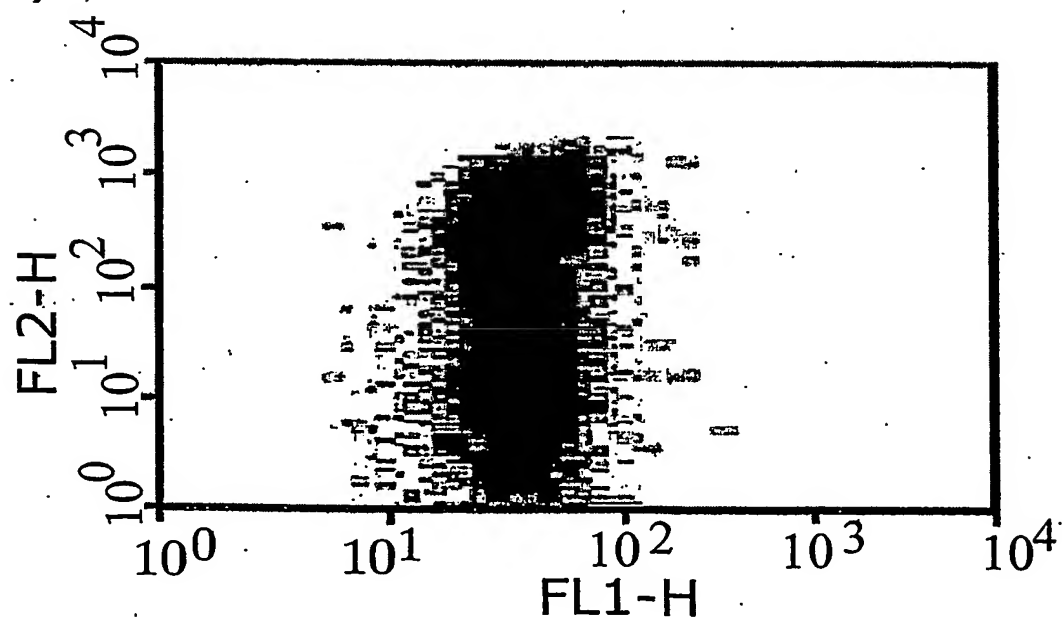
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Figure 7

E)



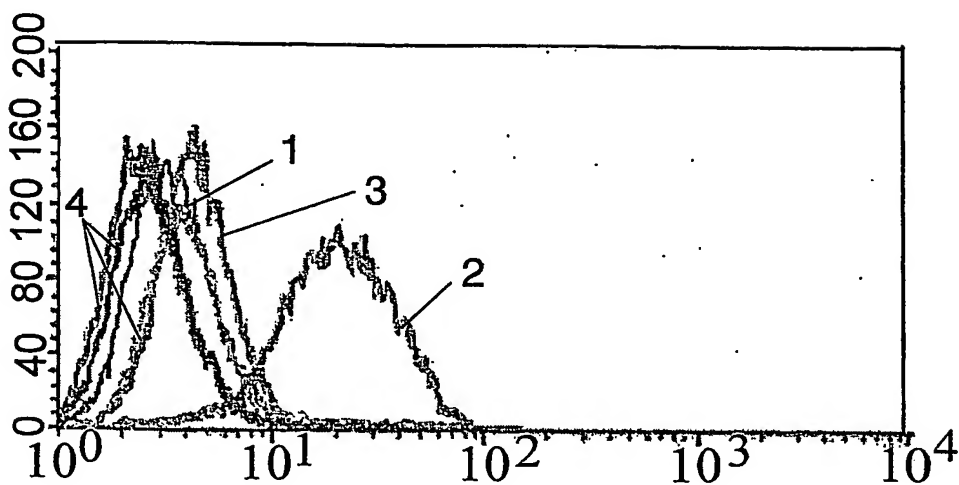
F)



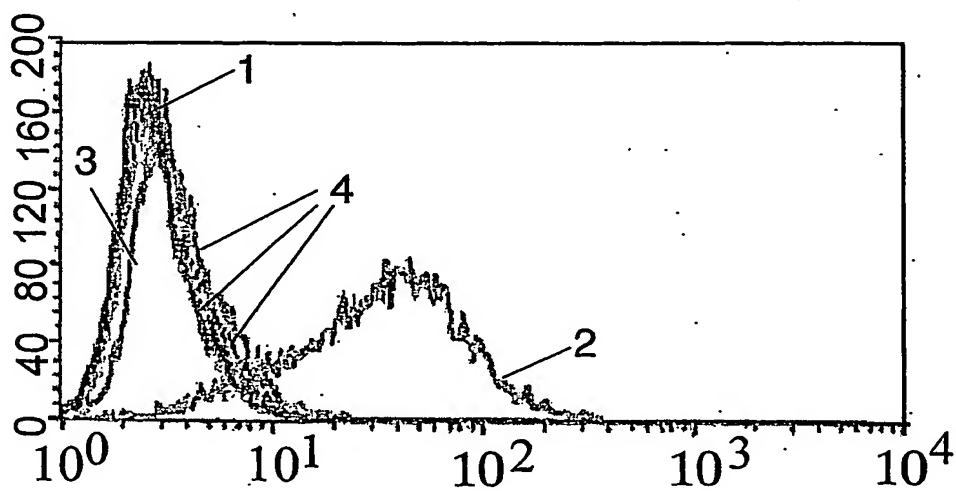
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Figure 8

A)



B)



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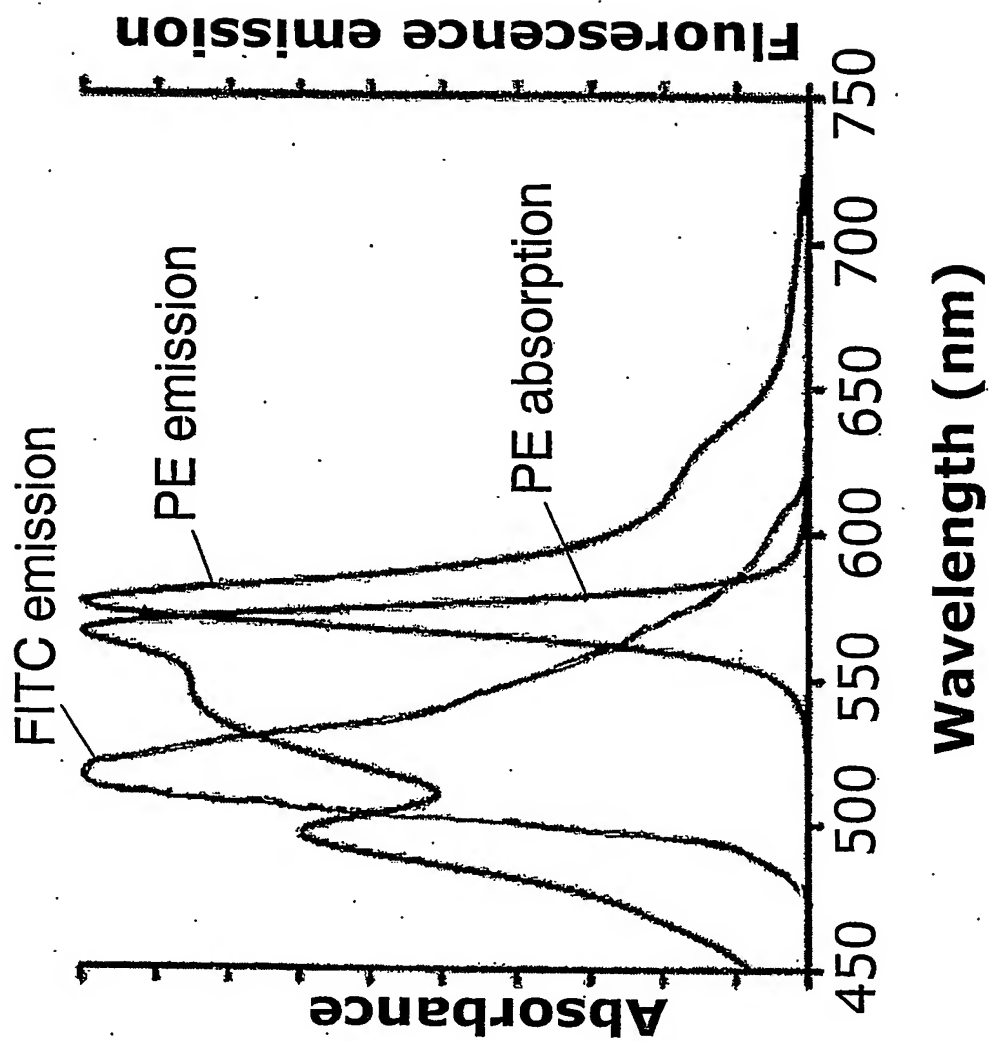


Figure 9

Figure 10

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DNA sequences of VH and VL derived from cell S2**A) VH (SEQ ID NO.: 58)**

GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCTGG
GGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTTA
GCAGCTATGCCATGAGCTGGGTCCGCCAGGCTCCAGGGAAGGGG
CTGGAGTGGGTCTCAGCTATTAGTGGTAGTGGTGGTAGCACATA
CTACGCAGACTCCGTGAAGGGCCGGTTCACCATCTCCAGAGACA
ATTCCAAGAACACGCTGTATCTGCAAATGAACAGCCTGAGAGCC
GAGGACACGGCCGTATATTACTGTGCGAAAGGAAGTGGGAGCTA
CTATTACTACTACTACTACATGGACGTCTGGGGCAAAGGGA
CCACGGTCACCGTCTCCTCA

B) VL (SEQ ID NO.: 59)

GACATCCAGGTGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCT
GGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTT
TATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAG
AAACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAC
CCGGGAATCCGGGGTCCCTGACCGATTTCAGTGGCAGCGGGTCTG
GGACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGAT
GTGGCAGTTTATTACTGTCAGCAGTATTATAGTACCCCACTCAC
TTTCGGCGGAGGGACCAAGGTGGAGATCAAA

Figure 11

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DNA sequences of VH and VL derived from cell S9**A) VH (SEQ ID NO.: 60)**

GAGGTGCAGCTGGTGGAGTCTGGCCCAGGACTGGTGAAGCCTTC
GGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCATCA
GTAGTTACTACTGGAGCTGGATCCGGCAGCCCCCAGGGAAGGGA
CTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCAACTA
CAACCCCTCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGT
CCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGACCGCTGCG
GACACGGCCGTGTATTACTGTGCGAGAGAGGGTGGACCTCTCAT
CATGGGTGCTTTTGATATCTGGGGCCAAGGGACAATGGTCACCG
TCTCTTCA

B) VL (SEQ ID NO.: 61)

TCTTCTGAGCTGACTCAGGACCCTGCTGTGTCTGTGGCCTTGGG
ACAGACAGTCAGGATCACATGCCAAGGAGACAGCCTCAGAAGCT
ATTATGCAAGCTGGTACCAGCAGAAGCCAGGACAGGCCCTGT
CTTGTCATCTATGGTAAAAACAACCGGCCCTCAGGGATCCCAGA
CCGATTCTCTGGCTCCAGCTCAGGAAACACAGCTTCCTTGACCA
TCACTGGGGCTCAGGCGGAAGATGAGGCTGACTATTACTGTAAC
TCCCGGGACAGCAGTGGTAACCTTTTGGTGTTCGGCGGAGGGAC
CAAGCTGACCGTCCTA

Figure 12

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**Protein and DNA sequences of scFv derived
from cell S2****A) Protein (SEQ ID NO.: 62)**

DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQ
KPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAED
VAVYYCQQYYSTPLTFGGGTKVEIKGGGGSGGGGSGGGGSEVQL
LESGGGLVQPGGSLRLSCAASGFTFSSYAMSWVRQAPGKGLEWV
SAISGSGGSTYYADSVKGRFTISRDN SKNTLYLQMNSLRAEDTA
VYYCAKGS GSYYYYYYYYMDVWGKGTTVTVSS

B) DNA (SEQ ID NO.: 63)

GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCT
GGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTT
TATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAG
AAACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAC
CCGGGAATCCGGGGGTCCCTGACCGATTTCAGTGGCAGCGGGTCTG
GGACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGAT
GTGGCAGTTTATTACTGTCAGCAGTATTATAGTACCCCACTCAC
TTTCGGCGGAGGGACCAAGGTGGAGATCAAAGGTGGTGGTGGTT
CTGGCGGCGGCGGCTCCGGTGGTGGTGGTTCTGAGGTGCAGCTG
CTGGAGTCTGGGGGAGGCTTGGTACAGCCTGGGGGGGTCCCTGAG
ACTCTCCTGTGCAGCCTCTGGATTACCTTTAGCAGCTATGCCA
TGAGCTGGGTCCGCCAGGCTCCAGGGAAGGGGCTGGAGTGGGTC
TCAGCTATTAGTGGTAGTGGTGGTAGCACATACTACGCAGACTC
CGTGAAGGGCCGGTTCACCATCTCCAGAGACAATTCCAAGAACA
CGCTGTATCTGCAAATGAACAGCCTGAGAGCCGAGGACACGGCC
GTATATTACTGTGCGAAAGGAAGTGGGAGCTACTATTACTACTA
CTACTACTACATGGACGTCTGGGGCAAAGGGACCACGGTCACCG
TCTCCTCA

Figure 13

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Protein and DNA sequences of scFv derived from cell S9**A) Protein (SEQ ID NO.: 76)**

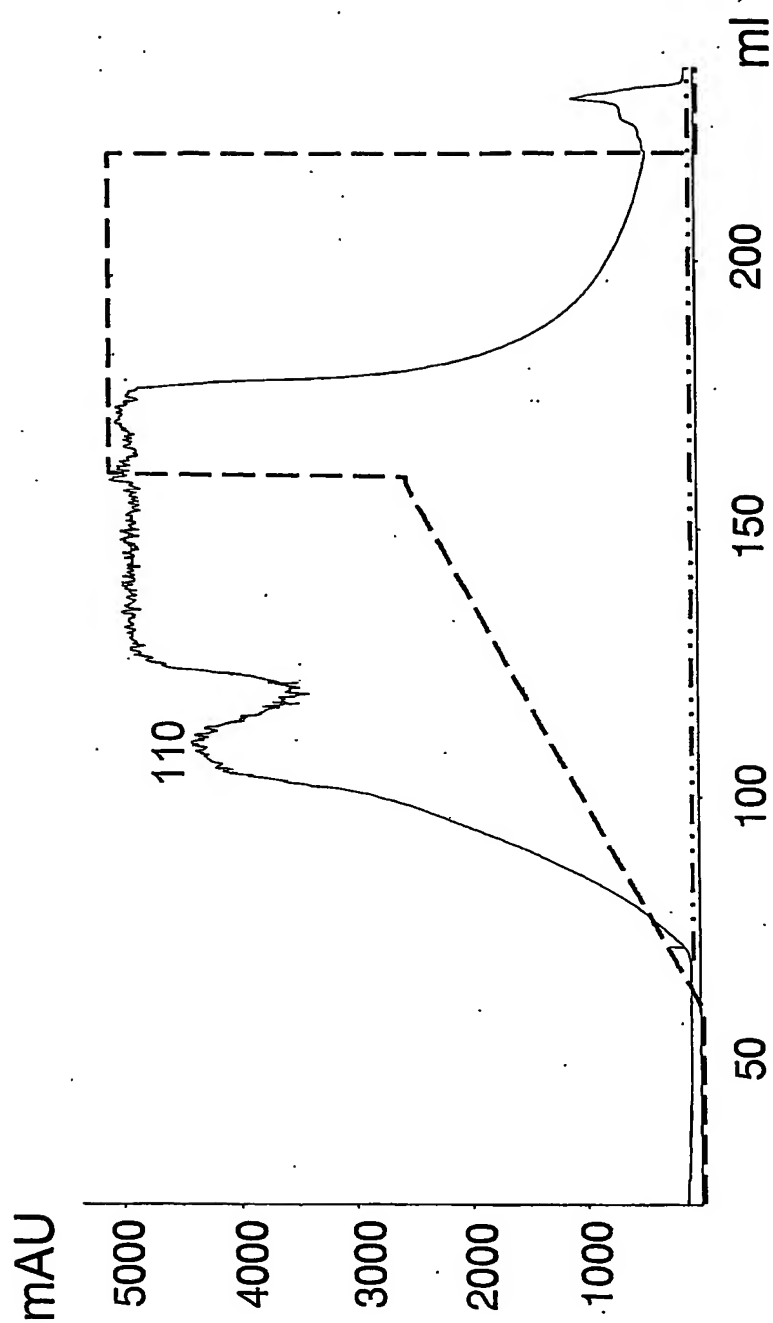
SSELTQDPAVSVALGQTVRITCQGDLSRSYYASWYQQKPGQAPV
LVIYGKNNRPSGIPDRFSGSSSGNTASLTITGAQAEDEADYYCN
SRDSSGNLLVFGGGTKLTVLGGGGSGGGGSGGGGSQVQLQESGP
GLVKPSETLSLTCTVSGGSISSYYWSWIRQPPGKGLEWIGYIYY
SGSTNYNPSLKSRTISVDTSKNQFSLKLSSVTAADTAVYYCAR
EGGPLIMGAFDIWGQGTMVTVSS

B) DNA (SEQ ID NO.: 77)

TCTTCTGAGCTGACTCAGGACCCTGCTGTGTCTGTGGCCTTGGG
ACAGACAGTCAGGATCACATGCCAAGGAGACAGCCTCAGAAGCT
ATTATGCAAGCTGGTACCAGCAGAAGCCAGGACAGGCCCTGTA
CTTGTCATCTATGGTAAAAACAACCGGCCCTCAGGGATCCCAGA
CCGATTCTCTGGCTCCAGCTCAGGAAACACAGCTTCCTTGACCA
TCACTGGGGCTCAGGCGGAAGATGAGGCTGACTATTACTGTAAC
TCCCGGGACAGCAGTGGTAACCTTTTGGTGTTCGGCGGAGGGAC
CAAGCTGACCGTCCTAGGTGGTGGTGGTTCTGGCGGCGGCGGCT
CCGGTGGTGGTGGTTCTCAGGTGCAGCTGCAGGAGTCTGGCCCA
GGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACCTGCACTGT
CTCTGGTGGCTCCATCAGTAGTTACTACTGGAGCTGGATCCGGC
AGCCCCCAGGGAAGGGACTGGAGTGGATTGGGTATATCTATTAC
AGTGGGAGCACCAACTACAACCCCTCCCTCAAGAGTCGAGTCAC
CATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAGCTGA
GCTCTGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGA
GAGGGTGGACCTCTCATCATGGGTGCTTTTGATATCTGGGGCCA
AGGGACAATGGTCACCGTCTCTTCA

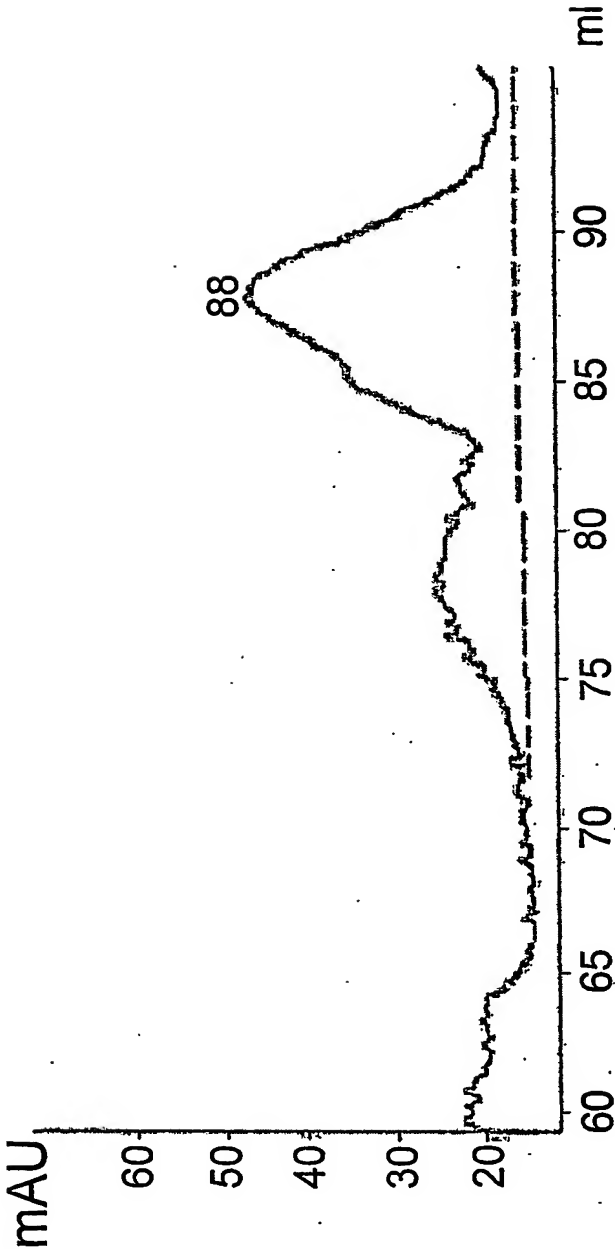
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Figure 14



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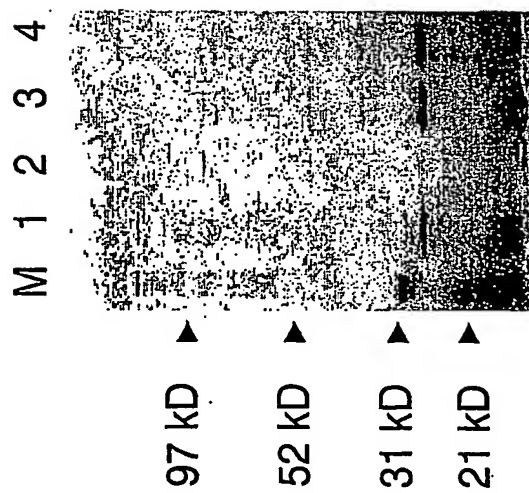
Figure 15



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Figure 16

A)



B)

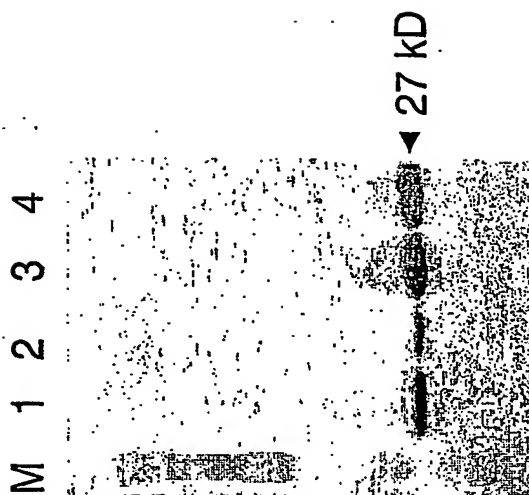
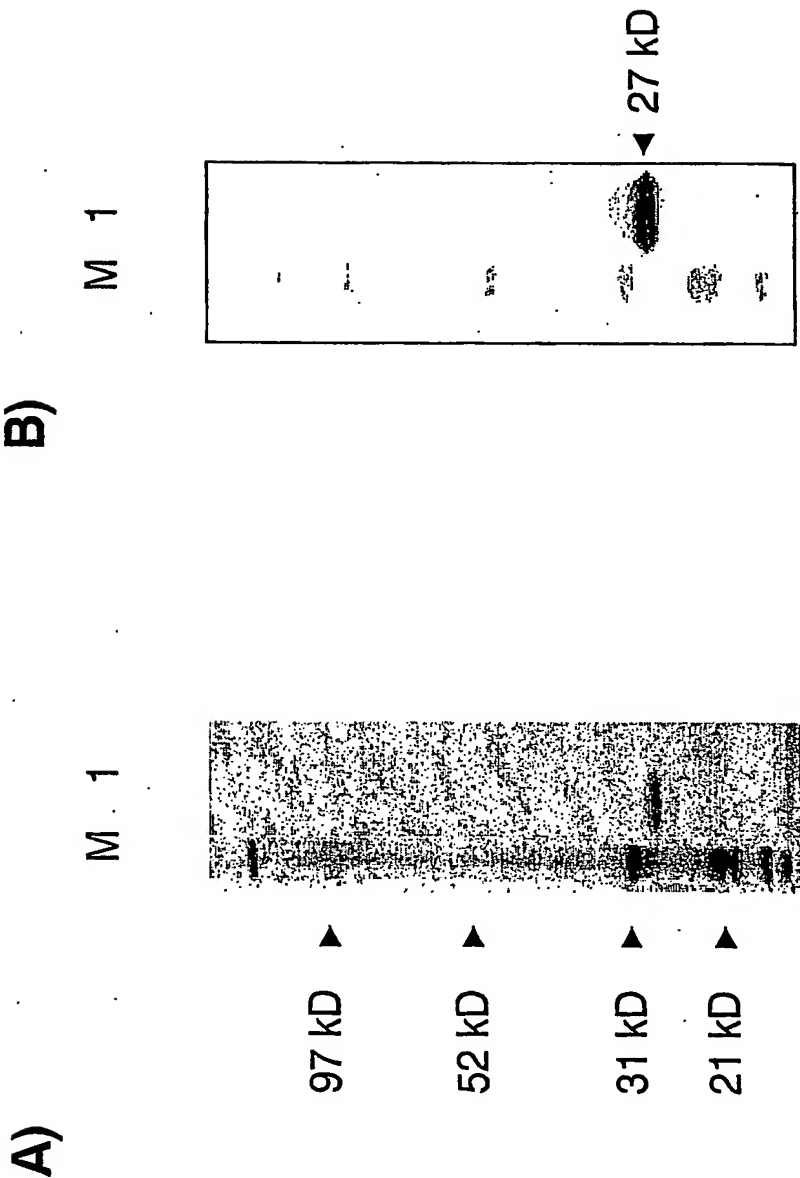
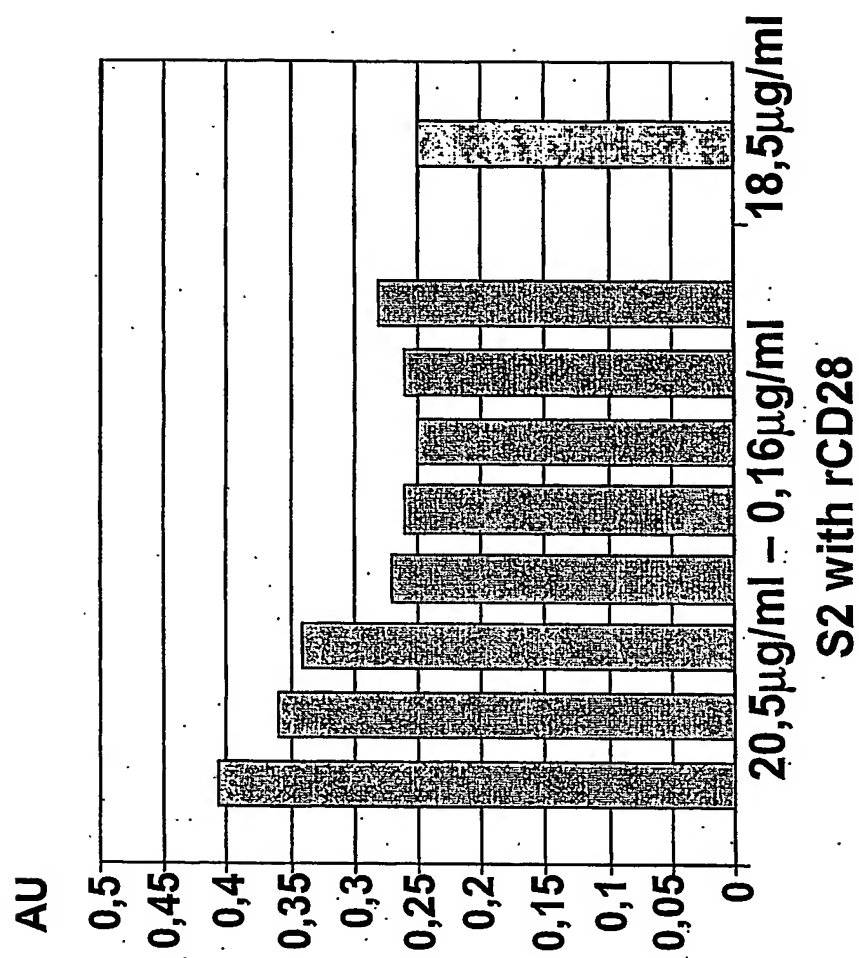


Figure 17



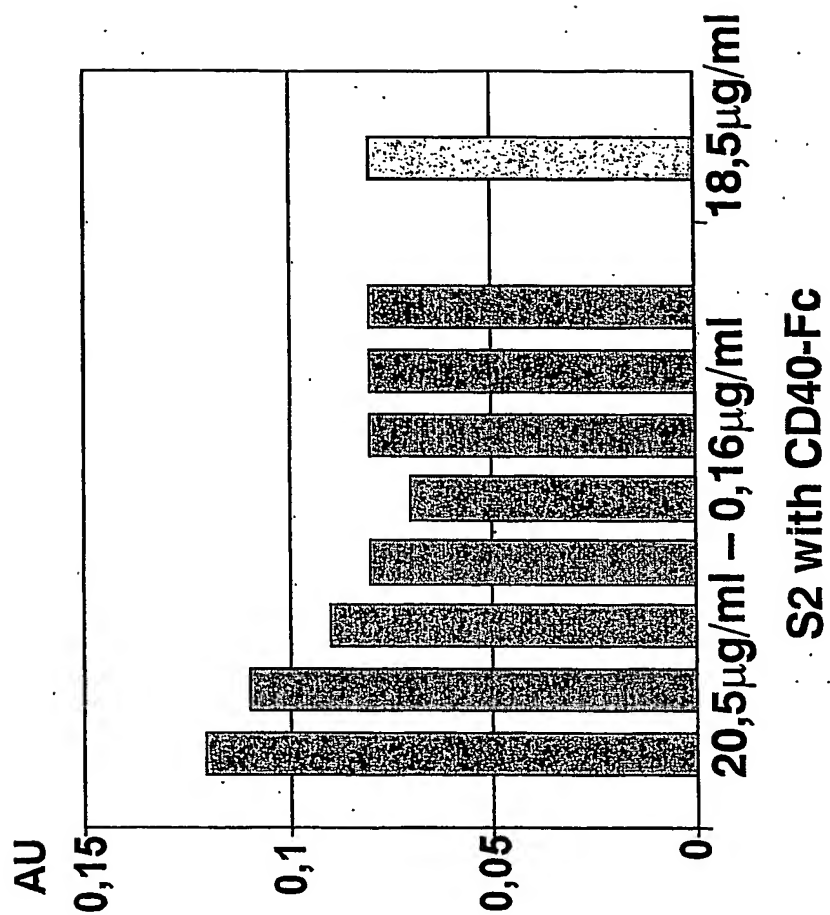
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Figure 18 A



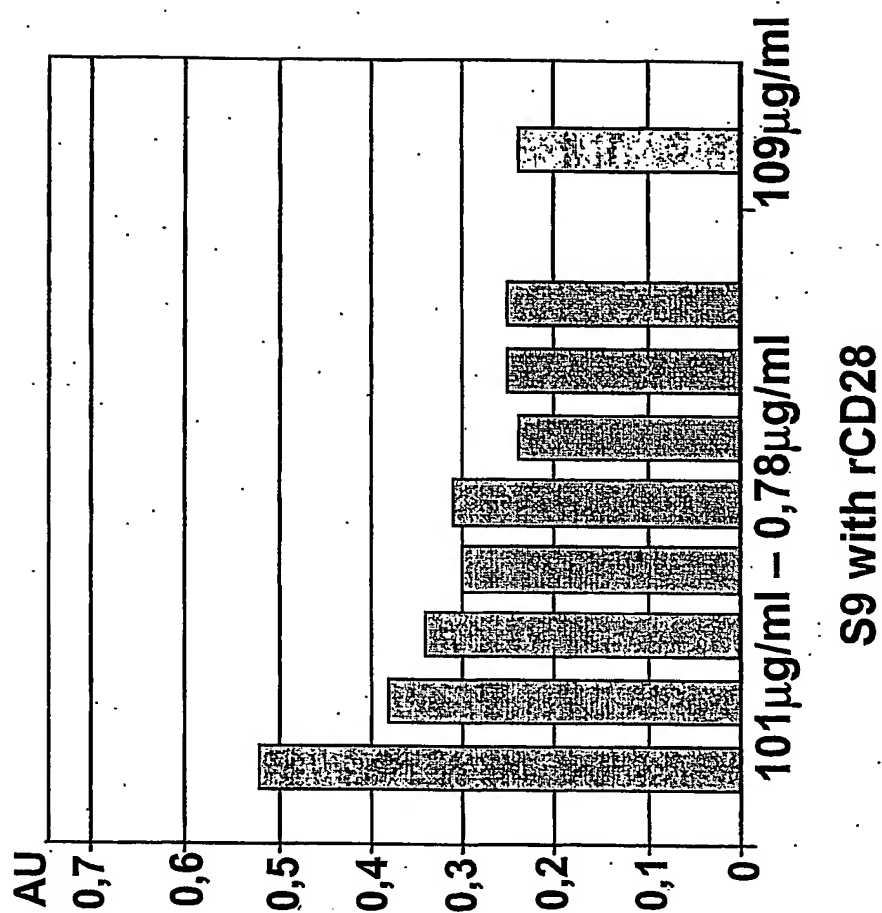
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Figure 18 B



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Figure 18 C



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Figure 18 D

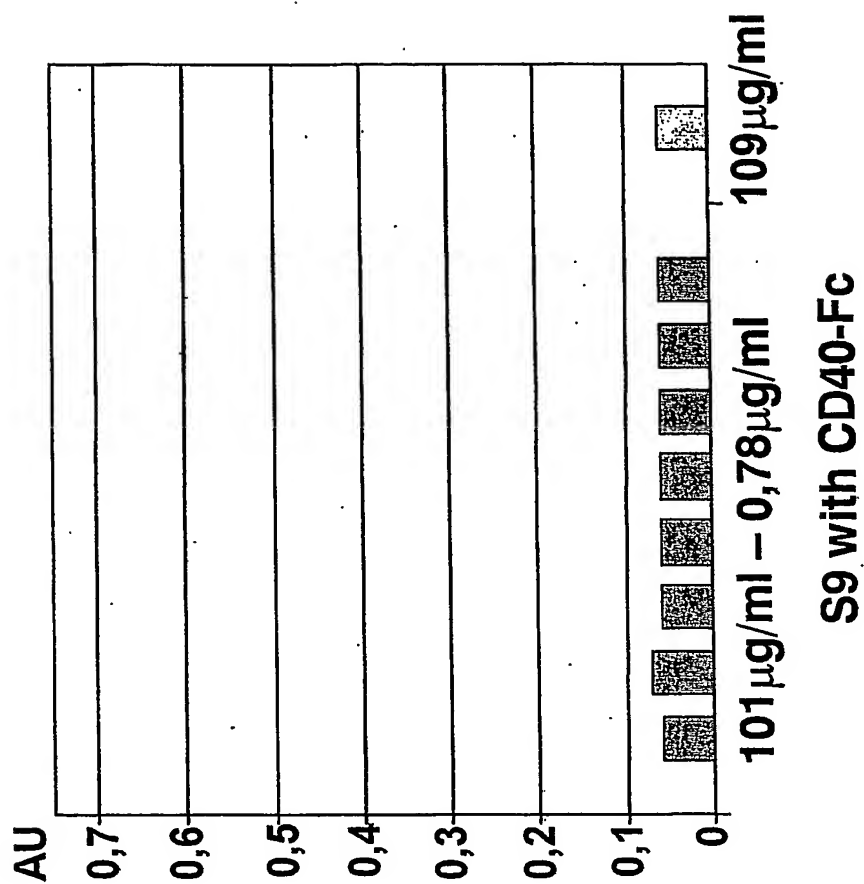
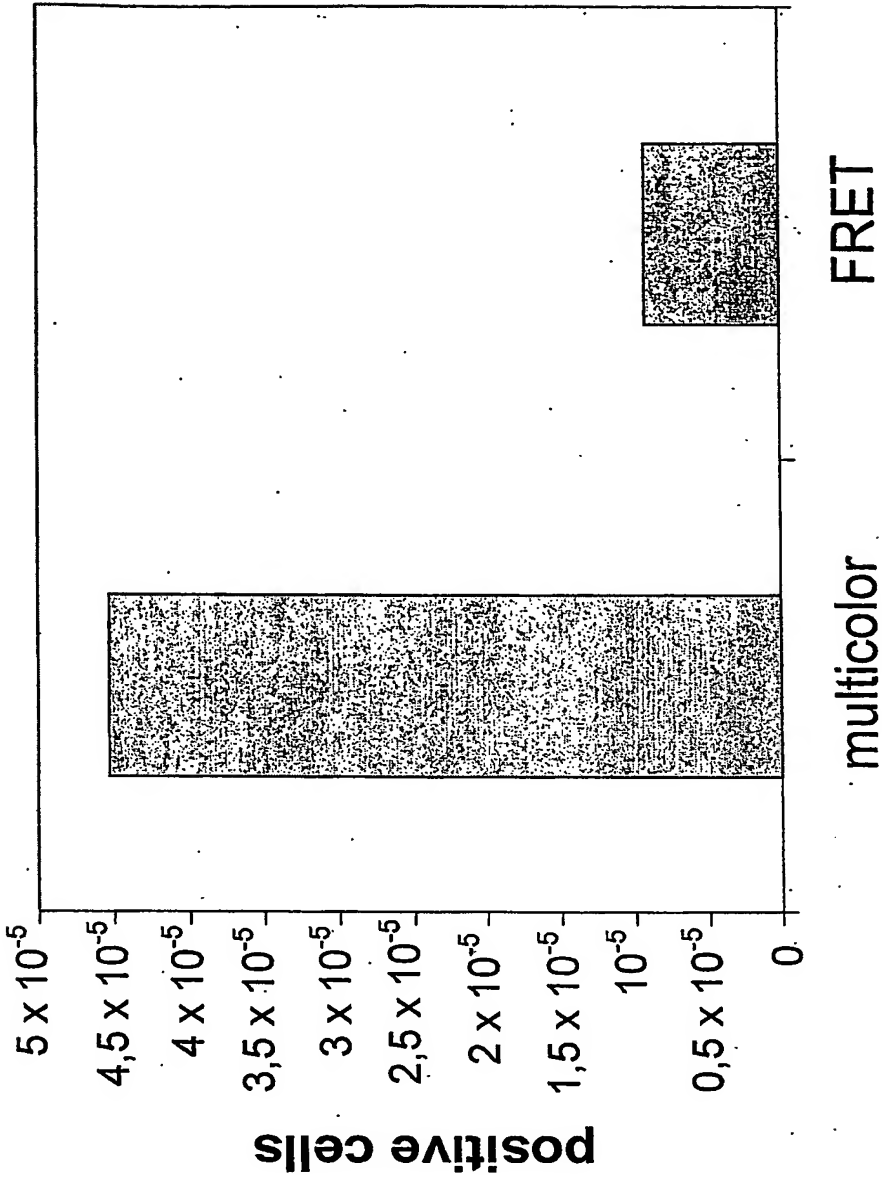


Figure 19



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